PART 70 OPERATING PERMIT
and ENHANCED NEW SOURCE REVIEW
OFFICE OF AIR MANAGEMENT

Thomson Consumer Electronics
3301 S. Adams Street
Marion, Indiana 46953

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T053-7202-00020	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date:

TABLE OF CONTENTS

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.11 Compliance Schedule [326 IAC 2-7-6(3)]
C.12 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
C.13 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
C.14 Thermocouple Specifications
C.15 Pressure Gauge Specifications

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.17 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]
C.18 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5]
C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]
C.21 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]
C.22 General Record Keeping Requirements [326 IAC 2-7-5(3)]
C.23 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

Stratospheric Ozone Protection

C.24 Compliance with 40 CFR 82 and 326 IAC 22-1

D.1 FACILITY OPERATION CONDITIONS - Three(3) Natural Gas and/or No. 2 Fuel Oil Fired Boilers

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Sulfur Dioxide (SO2) [326 IAC 7-1.1]
D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]
D.1.3 Particulate Matter (PM) [326 IAC 6-2-3(b)]
D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
D.1.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Visible Emission Notations

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements
D.1.9 Reporting Requirements

D.2 FACILITY OPERATION CONDITIONS - Five (5) Natural Gas Fired Lehr Generators

Emission Limitations and Standards [326 IAC 2-7-5(1)]

Compliance Determination Requirements

D.2.1 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3 FACILITY OPERATION CONDITIONS - Four (4) Blackener Units

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.3.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2] [40 CFR 52.21]
D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.3.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.3.4 Record Keeping Requirements
D.3.5 Reporting Requirements

D.4 FACILITY OPERATION CONDITIONS - Base Plant Production Processes

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.4.1 Particulate Matter Limitation (PM) [326 IAC 6-3-2]

Compliance Determination Requirements
D.4.2 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.4.3 Visible Emissions Notations

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.4.4 Record Keeping Requirements

D.5 FACILITY OPERATION CONDITIONS - Picture Tube Recovery Operation B-SALVAGE

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.5.1 Particulate Matter (PM) [326 IAC 6-3-2]
D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.5.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.5.4 Visible Emission Notations
D.5.5 Parametric Monitoring
D.5.6 Scrubber Inspections
D.5.7 Failure Detection

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.5.6 Record Keeping Requirements

D.6 FACILITY OPERATION CONDITIONS - Very Large Screen Production Line

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.6.1 Prevention of Significant Deterioration [326 IAC 2-2]
D.6.2 Particulate Matter (PM) [326 IAC 6-3-2]
D.6.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Compliance Determination Requirements
D.6.4 Testing Requirements [326 IAC 2-7-6(1), (6)]

Compliance Monitoring Requirements
D.6.5 Particulate Matter (PM)
D.6.6 Compliance Monitoring
D.6.7 Scrubber Monitoring
D.6.8 Scrubber Inspection
D.6.9 Scrubber Failure
D.6.10 Visible Emission Notations

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]
D.6.11 Record Keeping Requirements

D.7 FACILITY OPERATION CONDITIONS - Research and Development Line

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]
D.7.2 Particulate Matter [326 IAC 6-3-2]

Compliance Determination Requirements
D.7.3 Testing Requirements [326 IAC 2-7-6(1), (6)]
D.7.4 Volatile Organic Compounds (VOC)
D.7.5 VOC Emissions

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.7.6 Visible Emissions Notations

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.7.7 Record Keeping Requirements
D.7.8 Reporting Requirements

D.8 FACILITY OPERATION CONDITIONS - VLS Blackeners

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.8.1 PSD Minor Source Limit [326 IAC 2-2][40 CFR 52.21]
D.8.2 Particulate Matter (PM) [326 IAC 6-3-2]
D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.8.4 Testing Requirements [326 IAC 2-7-6(1), (6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.8.5 CO Emissions

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.8.6 Record Keeping Requirements
D.8.7 Reporting Requirements

D.9 FACILITY OPERATION CONDITIONS - Surface Coating

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.9.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]
D.9.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]
D.9.3 Particulate Matter (PM) [326 IAC 6-3]

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary source which manufactures television picture tubes.

Responsible Official:	Dillip N. Patel
Source Address:	3301 S. Adams Street, Marion, Indiana 46953
Mailing Address:	3301 S. Adams Street, Marion, Indiana 46953
SIC Code:	3671 (Miscellaneous Manufacturing)
County Location:	Grant
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) Three (3) natural gas and #2 fuel-oil fired boilers identified as:

(1) BLR1 rated at 34.3 million Btu per hour, constructed in 1949 and exhausting through stack 23-27.

(2) BLR2 rated at 34.3 million Btu per hour, constructed in 1950 and exhausting through stack 23-16.

(3) BLR3 rated at 66.6 million Btu per hour, constructed in 1950 and exhausting through stack 23-13.

(b) Five (5) natural gas fired Lehr Generators identified as:

(1) Lehr #5 rated at 22.8 million Btu per hour, constructed in 1962 expanded in 1995 and exhausting through stacks 22W-24, 22W-48, 22W-53, 22W-97, and 22W-98;

(2) Lehr #6 rated at 14.8 million Btu per hour, constructed in 1965 and exhausting through stacks 22W-23, 22W-26, 22W-49, and 22W-54.

(3) Lehr #7 rated at 18.4 million Btu per hour, constructed in 1965 and exhausting through stacks 26A-39, 26A-40, and 26A-41, and 25A-42;

(4) Lehr #8 rated at 18.4 million Btu per hour, constructed in 1966 expanded in 1994 and exhausting through stacks 26A-49, 26A-50, 26A-51, and 26A-52;

(5) Lehr #9 rated at 22.8 million Btu per hour exhausting through stacks 22W-32, 22W-33, 22W-44, 22W-95, and 22W-96.

(c) Four (4) Base Plant Blackener Units identified as:

(1) B-BLK1 with a rated maximum capacity of 11,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1966 and exhausting through stacks 26B-15 and 26B-17;

(2) B-BLK2 with a rated maximum capacity of 14,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1966/67 and exhausting through stacks 26B-14 and 26B-16;

(3) B-BLK3 with a rated maximum capacity of 13,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1978 and exhausting through stacks 26B-12 and 26B-13;

(4) B-BLK4 with a rated maximum capacity of 11,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1981 and exhausting through stacks 27N-29 and 27N-31.

(d) Base Plant production processes, all with a rated capacity of 750 picture tubes per hour, including:

(1) A screening film process identified as B-SFILM, constructed in 1960;

(2) A frit mixing and application process identified as B-FRIT, constructed in 1949;

(3) A glass and general cleaning process identified as B-CLEAN, constructed in 1949.

(e) A picture tube recovery operation identified as B-SALVAGE, constructed in 1949, with a rated capacity of 100 picture tubes per hour. The process includes:

(1) Caustic degreasing and de-chipper operations controlled by scrubber No.3 which exhausts through stack 17-2;

(2) De-bead tanks controlled by scrubber No. 2 exhausting through stack 18-31;

(3) Defriting and acid fortification operations controlled by scrubber No.1 which exhausts through stack 19-1.

(f) A Very Large Screen (VLS) production line, constructed in 1990, with a rated capacity of 125 picture tubes per hour which includes the following processes:

(1) One (1) panel wash station with a rated capacity of 125 parts per hour, and one (1) picture tube salvage operation with a rated capacity of 18 parts per hour, controlled by the VLS scrubber No. 9 exhausting through stack 34-E34;

(2) One (1) matrix development station with a rated capacity of 125 parts per hour;

(3) One (1) spray film station with a rated capacity of 125 parts per hour controlled by an incinerator exhausting through stack 9;

(4) One (1) glass cleaning station with a rated capacity of 125 parts per hour;

(5) One (1) frit mixing operation and One (1) frit application station for manual application with a rated capacity of 125 parts per hour;

(6) One (1) external coating operation with a rated capacity of 125 parts per hour.

(g) A Research and Development production line, constructed in 1997and exhausting through stack EPS-1. All other information regarding this line is claimed confidential by the source.

(h) Three (3) Blackener Units (VBLK-1, VBLK-2, VBLK-3) in the Very Large Screen Production Line each with a rated capacity of 9400 cubic feet per hour exhausting through stacks 27A-E14, 27A-E15, and 27A-E16, limited to 249 tons per twelve consecutive month period of inlet Carbon Monoxide.

(i) Surface Coating Production line, constructed in 1998, with a rated capacity of 940 picture tubes per hour total which includes:

(1) Three (3) high volume, low pressure (HVLP) automatic spray stations for applying anti-corona silicone coating, with a rated capacity of 940 picture tubes per hour total;

(2) Three (3) automatic roll-on stations for applying graphite external coating with a rated capacity of 940 glass picture tubes per hour total.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment, grinding and machining operations, and degreasing.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

(a) Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7.

(b) This prohibition shall not apply to alleged violations of applicable requirements for which the Commissioner has granted a permit shield in accordance with 326 IAC 2-7-15, as set out in this permit in the Section B condition entitled “Permit Shield.”

B.2 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in
IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Permit Term [326 IAC 2-7-5(2)]

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

B.4 Enforceability [326 IAC 2-7-7(a)]

(a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.

(b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source’s potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.6 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall furnish to IDEM, OAM, within a reasonable time, any information that IDEM, OAM, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

(c) Upon request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAM, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, then the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit constitutes a violation of the Clean Air Act and is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; or

(3) Denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.10 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.11 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was based on continuous or intermittent data;

(4) The methods used for determining compliance of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3);

(5) Any insignificant activity that has been added without a permit revision; and

(6) Such other facts, as specified in Sections D of this permit, as IDEM, OAM, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

B.12 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days (this time frame is determined on a case by case basis but no more than ninety (90) days) after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM.

B.13 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Management, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted notice, either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAM, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.

(f) Failure to notify IDEM, OAM, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.14 Permit Shield [326 IAC 2-7-15]

(a) This condition provides a permit shield as addressed in 326 IAC 2-7-15.

(b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that:

(1) The applicable requirements are included and specifically identified in this permit; or

(2) The permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable.

(c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application.

(e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAM, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAM, has issued the modification. [326 IAC 2-7-12(b)(7)]

B.15 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

B.16 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) An emergency as defined in 326 IAC 2-7-1(12); or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

(c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

B.17 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)]

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAM, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.18 Permit Renewal [326 IAC 2-7-4]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(2) If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAM, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAM, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAM, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.19 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.20 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.21 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-7-20(b)]

The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a) and the following additional conditions:

(a) For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

(b) The permit shield, described in 326 IAC 2-7-15, shall not apply to any change made under 326 IAC 2-7-20(b).

B.22 Operational Flexibility [326 IAC 2-7-20]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAM, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

(b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAM, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.23 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

B.24 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-7-6(6)]

(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source.

In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

(2) The Permittee, and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

B.25 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.26 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

(a) The Permittee shall pay annual fees to IDEM, OAM, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM, the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 PSD Major Source Status [326 IAC 2-2] [40 CFR 52.21]

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21, this source is a major source.

C.2 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.7 Operation of Equipment [326 IAC 2-7-6(6)]

All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.10 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.11 Compliance Schedule [326 IAC 2-7-6(3)]

The Permittee:

(a) Has certified that all facilities at this source are in compliance with all applicable requirements; and

(b) Has submitted a statement that the Permittee will continue to comply with such requirements; and

(c) Will comply with such applicable requirements that become effective during the term of this permit.

C.12 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.13 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.14 Thermocouple Specifications

Whenever a condition in this permit requires the measurement of temperature, the thermocouple employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

C.15 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ninety (90) days after the date of issuance of this permit.

The ERP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.17 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

(a) Submit:

(1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or

(2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

(3) A verification to IDEM, OAM, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.

(b) Provide annual certification to IDEM, OAM, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.18 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within “normal” parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline.

Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate and differentiate actual emissions of other regulated pollutants from the source that are and are not already included in its criteria emissions summary, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

C.21 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.22 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.23 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

Stratospheric Ozone Protection

C.24 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
Three (3) natural gas and/or No. 2 fuel oil fired boilers identified as:
(1) BLR1 rated at 34.3 million Btu per hour, constructed in 1949 and exhausting through stack 23-27;
(2) BLR2 rated at 34.3 million Btu per hour, constructed in 1950 and exhausting through stack 23-16;
(3) BLR3 rated at 66.6 million Btu per hour, constructed in 1950 and exhausting through stack 23-13.

D.1.1 Sulfur Dioxide (SO2) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1 (SO2 Emission Limitations) the SO2 emissions from the boilers BLR1, BLR2, and BLR3 shall not exceed 0.5 pounds per million Btu when combusting distillate fuel oil.

D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to OP 27-04-89-0187, OP 27-04-89-0188, and OP 27-04-89-0189 issued on September 10, 1986, the use of No. 2 fuel oil in Boilers BLR1, BLR2, and BLR3 shall not exceed a total of 1,800,000 gallons per twelve month period rolled on a monthly basis. Compliance with this condition along with condition D.1.1 makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.3 Particulate Matter (PM) [326 IAC 6-2-3(b)]

Pursuant to 326 IAC 6-2-3(b) (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the total of the three boilers BLR1, BLR2, and BLR3 shall be limited to 0.453 pounds per million Btu heat input.

This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where:

C = Maximum Ground Level Concentration with respect to distance from the point source at the “critical” wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

Pt = Pounds of particulate matter emitted per million Btu.

Q = Total source maximum operating capacity rating in million Btu per hour heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility’s operated or the nameplate capacity, whichever is specified in the facility’s operation permit; in which case, the capacity specified in the operation permit shall be used.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 million Btu per hour heat input. The value 0.8 shall be used for Q greater than 1,000 million Btu per heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height to represent "N" stacks shall be calculated by weighing each stack height with its particulate matter emission rate. In this instance all stack heights are equal at 54 feet.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B Preventative Maintenance Plan, of this permit, is required for this facility.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Sulfur Dioxide and Particulate matter limits specified in Condition D.1.1 and D.1.3 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate the fuel oil sulfur dioxide emissions does not exceed 0.5 pounds per million Btu by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Visible Emissions Notations

(a) Daily visible emission notations of the boilers' stack exhausts shall be preformed once per day during normal daylight operations when exhausting to the atmosphere where No. 2 fuel oil is used. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during the part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (6) below.

(1) Calendar dates covered in the compliance determination period;
(2) A actual usage of No. 2 fuel oil since the last compliance determination period;

(3) A certification, signed by the owner or operator, that the records of the fuel oil supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier is used to demonstrate compliance, the following, as a minimum shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier;

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required be this permit

(b) To document compliance with Condition D.1.7, the Permittee shall maintain records of daily visible emission notations of the No. 2 fuel oil-fired boilers stack exhausts.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 and the Natural Gas Boiler Certification shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
Five (5) natural gas fired Lehr generators identified as:
(1) Lehr #5 rated at 22.8 million Btu per hour, constructed in 1962, expanded in 1995 and exhausting through stacks 22W-24, 22W-31, 22W-48, 22W-53, 22W-97, and 22W-98;
(2) Lehr #6 rated at 14.8 million Btu per hour, constructed in 1965 and exhausting through stacks 22W-23, 22W-26, 22W-49, and 22W-54;
(3) Lehr #7 rated at 18.4 million Btu per hour, constructed in 1965 and exhausting through stacks 26A-39, 26A-40, 26A-41, and 26A-42;
(4) Lehr #8 rated at 18.4 million Btu per hour, constructed in 1965 and exhausting through stacks 26A-49, 26A-50, 26A-51, and 26A-52;
(5) Lehr #9 rated at 22.8 million Btu per hour, constructed in 1966, expanded in 1994 and exhausting through stacks 22W-32, 22W-33, 22W-44, 22W-95, and 22W-96.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

There are no applicable emission limitations or standards.

Compliance Determination Requirements

D.2.1 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

There are no applicable compliance monitoring requirements.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

There are no applicable record keeping or reporting requirements.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
Four (4) Base Plant Blackener Units identified as:
(1) B-BLK1 with a rated maximum capacity of 11,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1966 and exhausting through stacks 26B-15 and 26B-17;
(2) B-BLK2 with a rated maximum capacity of 14,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1966/97 and exhausting through stacks 26B-14 and 26B-16;
(3) B-BLK3 with a rated maximum capacity of 13,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1978 and exhausting through stacks 26B-12 and 26B-13;
(4) B-BLK4 Blackener with a rated maximum capacity of 11,000 cubic feet per hour and a maximum CO gas content of 2.5%, constructed in 1981 and exhausting through stacks 27N-29 and 27N-31.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to the conditions established in Construction Permit CP-053-8981, issued on December 4, 1997, the concentration of Carbon Monoxide in the excelene generators to the four blackeners B-BLK1, B-BLK2, B-BLK3, B-BLK4 shall be limited to 2.5 percent. This condition will limit the total potential to emit CO from all four blackeners to less than 250 tons per year. Therefore 326 IAC 2-2 (Prevention of Significant Deterioration), and 40 CFR 52.21 will not apply.

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B Preventative Maintenance Plan, of this permit, is required for this facility.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Carbon Monoxide limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.4 CO Emissions

Pursuant to Construction Permit CP053-8981 the Carbon Monoxide (CO) content (2.5%) of the excelene gas to Base Plant Blackener 3 (B-BLK3) shall be monitored on a weekly basis.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.5 Record Keeping Requirements

(a) To document compliance with Condition D.3.1, the Permittee shall maintain records of the Carbon Monoxide content to the four (4) Blackener units.

(b) To document compliance with Condition D.3.4, the Permittee shall maintain records of the Carbon Monoxide content to Base Plant Blackener 3.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
Base Plant production processes, all with a rated capacity of 750 picture tubes per hour, including:
(1) A screening film process identified as B-SFILM, constructed in 1960;
(2) A frit mixing and application process identified as B-FRIT, constructed in 1949;
(3) A glass and general cleaning process identified as B-CLEAN, constructed in 1949.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Matter Limitation (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations) the PM from the Frit application and sealing unit B-FRIT, B-SFILM, and B-CLEAN shall not exceed 1.95 pounds per hour when operating at a process weight rate of 660 pounds per hour:

The pounds per hour limitation was calculated with the following equation:

E = 4.10 P^0.67 where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.4.2 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter (PM) limit specified in Condition D.4.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

There are no applicable Compliance Monitoring Requirements.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

There are no applicable Record Keeping and Reporting Requirements.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
A picture tube recovery operation identified as B-SALVAGE, constructed in 1949, with a rated capacity of 100 picture tubes per hour. The process includes:

(1) Caustic degreasing and de-chipper operations controlled by scrubber No.3 which exhausts through stack 17-2;
(2) De-bead tanks controlled by scrubber No. 2 exhausting through stack 18-31;
(3) Defritting and acid fortification operations controlled by scrubber No.1 exhausting through stack 19-1.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations; the allowable PM emission rate from the Picture Tube Recovery Operation B-SALVAGE shall not exceed 4.82 pounds per hour when operating at a process weight rate of 1.27 tons per hour.

The pounds per hour limitation was calculated with the following equation:

E = 4.10 P^0.67 where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements

D.5.3 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter (PM) limit specified in Condition D.5.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.5.4 Visible Emissions Notations

(a) Daily visible emission notations of the picture tube recovery operation stack 18-31 exhausting from the scrubber Number 2 shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.5.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across scrubber No. 2 used in conjunction with the picture tube recovery operation, at least once weekly when the picture tube recovery operation is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across scrubber No. 2 shall be maintained within the range of 3.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.5.6 Scrubber Inspections

An inspection shall be performed each calender quarter of the scrubbers controlling the picture tube recovery operation when venting to the atmosphere. A scrubber inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

D.5.7 Failure Detection

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.8 Record Keeping Requirements

(a) To document compliance with Conditions D.5.4, the Permittee shall maintain records of daily visible emission notations of the picture tube recovery stack exhaust.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

A Very Large Screen (VLS) production line, constructed in 1990 with a rated capacity of 125 picture tubes per hour which includes the following processes:

(1) One (1) panel wash station with a rated capacity of 125 parts per hour, and one (1) picture tube salvage operation with a rated capacity of 18 parts per hour, controlled by the VLS scrubber No 9 exhausting through stack 34-E34;
(2) One (1) matrix development station with a rated capacity of 125 parts per hour;
(3) One (1) spray film station with a rated capacity of 125 parts per hour, exhausting through stack 9;
(4) One (1) glass cleaning station with a rated capacity of 125 parts per hour;
(5) One (1) frit mixing operation and one (1) frit application station for manual application with a rated capacity of 125 parts per hour;
(6) One (1) external dip coating operation with a rated capacity of 125 parts per hour.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Any change or modification which may increase actual emissions from the VLS operation (CP 053-8511) and the six surface coating operations (CP 053-8592)(Section D.9) to 25 tons per year or more of PM or 15 or more tons per year of PM_{10} shall require this stationary source to obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

(b) Any change or modification which may increase the Volatile Organic Compounds (VOC) emissions after control from the equipment covered in Construction Permits 053-8511 and 053-8592 to 40 tons per year or more shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

D.6.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 Process Operations, the allowable PM emission rate from the panel wash station and the picture tube salvage operation controlled by the VLS scrubber shall not exceed 13.99 pounds per hour when operating at a process weight rate of 54,750 tons per year.

The pounds per hour limitation was calculated with the following equation:

E = 4.10P^0.67 where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.6.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (New Facilities; general reduction requirements) and Construction Permit CP (27) 1890, CP 053-8511, and Operation Permit OP 1600-0020 the spray film process shall be controlled by a fume incinerator that has an overall control efficiency of 95 percent.

Compliance Determination Requirements

D.6.4 Testing Requirements [326 IAC 2-7-6(1),(6)

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter (PM) and Volatile Organic Compounds (VOC) limits specified in Condition D.6.2 and D.6.3 shall be

determined by a performance test conducted in accordance with Section C - Performance testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.5 Particulate Matter (PM)

Pursuant to Construction Permit CP (27) 1890, issued on February 16, 1994 and amended on June 14, 1995 (A053-4606), the VLS scrubber for PM control shall have an efficiency of 95%, and be in operation at all times when the VLS Production Line is in operation.

D.6.6 Compliance Monitoring- Thermal Oxidizer and Fume Incinerator

The Permittee shall continuously monitor the temperature of the fume incinerator to ensure that it is operating at a minimum temperature of 1400 F at all times.

D.6.7 Scrubber Monitoring

(a) The Permitee shall monitor and record the acid content, pressure drop and flow rate of the scrubber, at least once per week. The Preventive Maintenance Plan for the scrubber shall contain troubleshooting contingency and corrective actions for when the acid content, pressure drop and flow rate readings are outside of the normal range for any one reading.

(b) The instruments used for determining the acid content, pressure drop and flow rate shall be subjected to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

(c) The gauge employed to take the pressure drop across the scrubber or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within $\pm$ 2% of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.

D.6.8 Scrubber Inspection

An inspection shall be preformed each calendar quarter of the scrubber. Defective scrubber part(s) shall be replaced. A record shall be kept of the results of the inspection and the number of scrubber part(s) replaced.

D.6.9 Scrubber Failure

(a) In the event that a scrubber's failure has been observed:

(1) The affected process will be shut down immediately until the failed unit has been replaced.

(2) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

D.6.10 Visible Emission Notations

(a) Daily visible emission notations of the Very Large Screen (VLS) production line scrubber stacks 34-E34, 27A-E14, 27A-E15, 27A-E16, and 9 exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.11 Record Keeping Requirement

(a) To document compliance with Conditions D.6.6, D.6.7, and D.6.10 the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.6.3.

(1) Daily records of operating times and operating temperatures of the fume incinerator;

(2) Documentation of all corrective actions implemented, per event;

(3) Operation and preventive maintenance logs, including work purchase orders, shall be maintained;

(4) Quality Assurance / Quality Control (QA/QC) procedures;

(5) Operator standard operating procedures (SOP);

(6) Manufacturer's specifications or its equivalent;

(7) Equipment "troubleshooting" contingency plan;

(b) A record of the incinerator temperature;

(c) Maintain records of daily visible emission notations of the Very Large Screen (VLS) production line stack exhaust;

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
A Research and Development production line, constructed in 1997and exhausting through stack EPS-1. All other information regarding this line is claimed confidential by the source.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

The Research and Development production line shall be utilized for research and development purposes, and the VOC input from this process shall be limited to 4.0 tons per year. Therefore the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) will not apply.

D.7.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 Process Operations, the allowable PM emission rate from the Research and Development production line shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by the use of the equation:

E = 4.10P^0.67 where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.7.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Volatile Organic Compound (VOC) limits specified in Condition D.7.1 shall be determined by a performance test conducted in accordance with Section C - Performance testing.

D.7.4 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Conditions D.7.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.7.5 VOC Emissions

Compliance with Condition D.7.1 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.7.6 Visible Emissions Notations

(a) Daily visible emission notations of the Research and Development Production line stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.7.7 Record Keeping Requirements

(a) To document compliance with Conditions D.7.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.7.1.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each month;

(4) The cleanup solvent usage for each month;

(5) The total VOC usage for each month; and

(6) The weight of VOCs emitted for each compliance period.

(b) To document compliance with Condition D.7.5, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.7.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.7.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Three (3) Blackener Units (VBLK-1, VBLK-2, VBLK-3) in the Very Large Screen Production Line each with a rated capacity of 9400 cubic feet per hour exhausting through stacks 27A-E14, 27A-E15, and 27A-E16, limited to 249 tons per twelve consecutive month period of inlet Carbon Monoxide.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 PSD Minor Source Limit [326 IAC 2-2] [40 CFR 52.21]

All three (3) VLS Blackener units (VBLK-1, VBLK-2, VBLK-3) shall not exceed 249 tons per twelve consecutive month period of the inlet Carbon Monoxide. This condition will limit the total potential to emit CO from all three blackeners to less than 250 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration), and 40 CFR 52.21 not applicable.

During the first twelve months of operation, the inlet Carbon Monoxide shall be limited to less than 20.83 tons per month for all three of the VLS Blackeners (VBLK-1, VBLK-2, VBLK-3).

D.8.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 Process Operations, the allowable PM emission rate from the Research and Development production line shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by the use of the equation:

E = 4.10P^0.67 where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements

D.8.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter and Carbon Monoxide limit specified in Conditions D.8.2, and D.8.1 shall be determined by a performance test conducted in accordance with Section C - Performance testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.8.5 CO Emissions

Pursuant to Condition D.8.1, the Inlet Carbon Monoxide for the three (3) VLS Blackeners shall be monitored on a weekly basis. This will be accomplished by monitoring the Carbon Monoxide (CO) content of the excelene gas to the VLS Blackeners. The following equation will be used to determine compliance with the Carbon Monoxide limit.

Loading factor = 0.0808 lb eg/ CF eg * (CO Content % / 100 mole eg) * (28.01 lb CO / 28.97 lb eg)

Inlet CO = Loading Factor * Air Flow Rate

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.6 Record Keeping Requirements

(a) To document compliance with Conditions D.8.1, the Permittee shall maintain records of the Carbon Monoxide emissions from the three VLS Blackeners.

(b) To document compliance with Condition D.8.5, the Permittee shall maintain records of the Inlet Carbon Monoxide to the three (3) VLS Blackeners.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.8.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.8.1 and D.8.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
Surface Coating Production line, constructed in 1998, with a rated capacity of 940 picture tubes per hour total which includes:
(1) Three (3) high volume, low pressure (HVLP) automatic spray stations for applying anti-corona silicone coating, with a rated capacity of 940 picture tubes per hour total;
(2) Three (3) automatic roll-on stations for applying graphite external coating with a rated capacity of 940 glass picture tubes per hour total.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Any change or modification which may increase actual emissions from the VLS operation (CP 053-8511)(Section D.6) and the six surface coating operations (CP 053-8592) to 25 tons per year or more of PM or 15 or more tons per year of PM_{10} shall require this stationary source to obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

(b) Any change or modification which may increase the Volatile Organic Compounds (VOC) emissions after control from the equipment covered in Construction Permits 053-8511 and 053-8592 to 40 tons per year or more shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

D.9.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to Construction Permit CP 053-8592 and 326 IAC 8-1-6 (New Facilities; general reduction requirements), the use of the volatile organic compounds (VOC) including coatings, dilution solvents, and clean up solvent, minus the VOC solvent shipped out, shall not exceed 24 tons per twelve (12) consecutive month period.

D.9.3 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to CP 053-8592 and 326 IAC 6-3, the PM from the six (6) surface coating facilities shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where: E = rate of emission in pounds per hour
P = process weight in tons per hour

Compliance Determination Requirements

D.9.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter (PM) and Volatile Organic Compounds (VOC) limits specified in Condition D.9.2 and D.9.3 shall be determined by a performance test conducted in accordance with Section C- Performance testing.

D.9.5 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Conditions D.9.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.9.6 VOC Emissions

Compliance with Condition D.9.2 shall be demonstrated at the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

There are no applicable Compliance Monitoring Requirements.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.7 Record Keeping Requirements

(a) To document compliance with Condition D.9.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.9.2.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each month;

(4) The cleanup solvent usage for each month;

(5) The total VOC usage for each month; and

(6) The weight of VOCs emitted for each compliance period.

(b) To document compliance with Condition D.9.5, the Permittee shall maintain a log of monthly overspray observations, monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.9.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.9.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
Insignificant Activities
The following equipment related to manufacturing activities not resulting in the emission of HAP's: brazing equipment, cutting torches, soldering equipment, welding equipment.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the brazing equipment, cutting torches, soldering equipment, and welding equipment shall not exceed allowable PM emission rate based on the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.10.2 Organic Solvent Degreasing Operations [326 IAC 8-3]

The requirements listed in 326 IAC 8-3 no longer are applicable to the degreasing operation as the degreasing solvent has been substituted with a caustic material.

Compliance Determination Requirement

D.10.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.9.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, Indiana 46953
Mailing Address : 3301 S. Adams Street, Marion, Indiana 46953
Part 70 Permit No.: T053-7202-00020

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify)_____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY/DEVIATION OCCURRENCE REPORT

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, Indiana 46953
Mailing Address : 3301 S. Adams Street, Marion, Indiana 46953
Part 70 Permit No.: T053-7202-00020

This form consists of 2 pages **Page 1 of 2**

Check either No. 1 or No.2
9 1. This is an emergency as defined in 326 IAC 2-7-1(12) C The Permittee must notify the Office of Air Management (OAM), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and C The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
9 2. This is a deviation, reportable per 326 IAC 2-7-5(3)(c) C The Permittee must submit notice in writing within ten (**10**) calendar days

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency/Deviation:
Describe the cause of the Emergency/Deviation:

If any of the following are not applicable, mark N/A

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency/deviation:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, Indiana 46953
Mailing Address : 3301 S. Adams Street, Marion, Indiana 46953
Part 70 Permit No.: T053-7202-00020

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Report period
Beginning: _____
Ending: _____

Boiler Affected	Alternate Fuel	Days burning alternate fuel	
		From	To

I certify under penalty of law that at all times, except as otherwise noted above, only natural gas was burned in the indicated boilers during the report period. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
Quarterly Report

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, Indiana 46953
Mailing Address : 3301 S. Adams Street, Marion, Indiana 46953
Part 70 Permit No.: T053-7202-00020
Facility: BLR1, BLR2, and BLR3
Parameter: SO2
Limit: 1,800,000 gallons No. 2 fuel oil per twelve consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Fuel Usage This Month	Fuel Usage Previous 11 Months	Fuel Usage 12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, IN 46952
Mailing Address: 3301 S. Adams Street, Marion, IN 46952
Part 70 Permit No.: T053-7202-00020
Facility: Anti-Corona Silicone Spray Stations & Automatic Roll-On Stations
Parameter: Volatile Organic Compounds (VOC)
Limit: 24 tons/12 consecutive month period

Month: _____ **Year:** _____

Volatile Organic Compound (VOC) for Thinning, Coating, and Clean-Up From the Anti-Corona Silicone Spray and Roll-On Operations
(Annual Total Shall Not Exceed 24 Tons)

Tons of VOC from:	Month 1	Month 2	Month 3	Quarterly Total
Thinner				
Coating				
Clean-Up Solvent				
Minus VOC in Waste Shipped				
Totals				

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, IN 46952
Mailing Address: 3301 S. Adams Street, Marion, IN 46952
Part 70 Permit No.: T053-7202-00020
Facility: Electrophotographic Screen (EPS) production line
Parameter: Volatile Organic Compounds (VOC)
Limit: 4.0 tons/12 consecutive month period

Month: _____ **Year:** _____

Volatile Organic Compound (VOC) for Research and Development from the Electrophotographic Screen (EPS) Production Line
(Annual Total Shall Not Exceed 4 Tons)

Tons of VOC from:	Month 1	Month 2	Month 3	Quarterly Total
Thinner				
Coating				
Clean-Up Solvent				
Minus VOC in Waste Shipped				
Totals				

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, IN 46952
Mailing Address: 3301 S. Adams Street, Marion, IN 46952
Part 70 Permit No.: T053-7202-00020
Facility: BASE Plant B-BLK1, B-BLK2, B-BLK3, B-BLK4;
Parameter: Carbon monoxide (CO)
Limit: 2.5 percent (%) CO in the excelene gas stream

Month: _____ Year: _____

Month	Week	CO Content of excelene gas to blackeners (%)
Quarterly Total:		

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, IN 46952
Mailing Address: 3301 S. Adams Street, Marion, IN 46952
Part 70 Permit No.: T053-7202-00020
Facility: VLS Blackeners VBLK-2, VBLK-2, VBLK-3
Parameter: Carbon Monoxide (CO)
Limit: 249 tons per twelve consecutive months inlet Carbon Monoxide for all three blackeners;
First twelve months of operation 20.83 tons per month for all three blackeners.

(Annual Total Shall Not Exceed 249 Tons For All 3 Blackeners)
Month: _____ Year: _____

Month	Week	CO Content of excelene gas to blackeners (%)	Inlet Cabon Monoxide (tons/year) Determined by calculation
Quarterly Total:			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, IN 46952
Mailing Address: 3301 S. Adams Street, Marion, IN 46952
Part 70 Permit No.: T053-7202-00020
Facility: VLS Blackeners VBLK-2, VBLK-2, VBLK-3
Parameter: Carbon Monoxide (CO)
Limit: 249 tons per twelve consecutive months inlet Carbon Monoxide for all three blackeners;
First twelve months of operation 20.83 tons per month for all three blackeners.

Month: _____ **Year:** _____

(Annual Total Shall Not Exceed 249 Tons For All 3 Blackeners)

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY COMPLIANCE MONITORING REPORT

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, IN 46952
Mailing Address: 3301 S. Adams Street, Marion, IN 46952
Part 70 Permit No.: T053-7202-00020

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD:

Compliance Monitoring Requirement	Number of Deviations	Date of each Deviation

Form Completed By: _____
Title/Position: _____
Date: _____
Phone: _____

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Part 70 Operating Permit and Enhanced New Source Review

Source Background and Description

Source Name:	Thomson Consumer Electronics
Source Location:	3301 S. Adams Street, Marion, Indiana 46953
County:	Grant
SIC Code:	3671
Operation Permit No.:	T053-7202-00020
Permit Reviewer:	Lynn Nieman

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Thomson Consumer Electronics relating to the operation of a facility that manufactures television picture tubes. The process includes inserting lamination, adding hardware, impregnating, and curing in natural gas-fired ovens.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Three (3) natural gas and/or #2 fuel oil-fired boilers identified as:

(1) BLR1 rated at 34.3 MMBtu/hr, constructed in 1949, exhausting through stack 23-27;

(2) BLR2 rated at 34.3 MMBtu/hr, constructed in 1950, exhausting through stack 23-16;

(3) BLR3 rated at 66.6 MMBtu/hr, constructed in 1950, exhausting through stack 23-13.

(b) Five (5) natural gas fired Lehr generators identified as:

(1) Lehr #5 rated at 22.8 MMBtu/hr, constructed in 1962 expanded in 1995, exhausting through stacks 22W-24, 22W-31, 22W-48, 22W-53, 22W-97 and 22W-98;

(2) Lehr #6 rated at 14.8 MMBtu/hr, constructed in 1965, exhausting through stacks 22W-23, 22W-26, 22W-49, and 22W-54;

(3) Lehr #7 rated at 18.4 MMBtu/hr, constructed in 1965, exhausting through stacks 26A-39, 26A-40, and 26A-41, 26A-42;

(4) Lehr #8 rated at 18.4 MMBtu/hr, constructed in 1965, exhausting through stacks 26A-49, 26A-50, 26A-51, and 26A-52; and

(5) Lehr #9 rated at 22.8 MMBtu/hr, constructed in 1966 expanded in 1994, exhausting through stacks 22W-32, 22W-33, 22W-44, 22W-95 and 22W-96.

(c) Four (4) Blackener Units identified as:

(1) B-BLK1, constructed in 1966, with a rated maximum capacity of 11,000 cubic feet per hour and a maximum CO gas content of 2.5% exhausting through stacks 26B-15 and 26B-17;

(2) B-BLK2, constructed in 1966/67, with a rated maximum capacity of 14,000 cubic feet per hour and a maximum CO gas content of 2.5% exhausting through stacks 26B-14 and 26B-16;

(3) B-BLK3, constructed in 1978, with a rated maximum capacity of 13,000 cubic feet per hour and a maximum CO gas content of 2.5% exhausting through stacks 26B-12 and 26B-13; and

(4) B-BLK4, constructed in 1981, Blackener with a rated maximum capacity of 11,000 cubic feet per hour and a maximum CO gas content of 2.5% exhausting through stacks 27N-29 and 27N-31.

(d) Base Plant production processes all with a rated capacity of 750 picture tubes per hour including:

(1) A screening film process identified as B-SFILM, constructed in 1960;

(2) A frit mixing and application process identified as B-FRIT, constructed in 1949;

(3) A glass and general cleaning process identified as B-CLEAN, constructed in 1949.

(e) A picture tube recovery operation identified as B-SALVAGE, constructed in 1949, with a rated capacity of 100 picture tubes per hour. The process includes:

(1) Caustic degreasing and de-chipper operations controlled by scrubber No. 3 which exhausts through stack 17-2;

(2) De-bead tanks controlled by scrubber No. 2 exhausting through stack 18-31; and

(3) Defritting and acid fortification operations controlled by scrubber No. 1 which exhausts through stack 19-1.

(f) A Very Large Screen (VLS) production line, constructed in 1990, with a rated capacity of 125 picture tubes per hour which includes the following processes:

(1) One (1) panel wash station with a rated capacity of 125 parts per hour, and one (1) picture tube salvage operation with a rated capacity of 18 parts per hour, controlled by the VLS scrubber No. 9 exhausting through stack 34-E33;

(2) Three (3) blackener units each with a rated capacity of 9,400 cubic feet per hour and a maximum CO gas content of 2.5% exhausting through stacks 27A-E14, 27A-E15 and 27A-E16;

(3) One (1) matrix development station with a rated capacity of 125 parts per hour controlled by a fume incinerator to control volatile organic compound emissions, exhausting through stack 9.

(4) One (1) spray film station with a rated capacity of 125 parts per hour, controlled by an incinerator exhausting through stack 9,

(5) One (1) glass cleaning station with a rated capacity of 125 parts per hour,

(6) One (1) frit mixing operation and One (1) frit application station for manual application with a rated capacity of 125 parts per hour, and

(7) One (1) external coating operation with a rated capacity of 125 parts per hour.

(g) A Research and Development production line, constructed in 1997and exhausting through stack EPS-1. All other information regarding this line is claimed confidential by the source.

(h) Surface Coating Production line, constructed in 1998, with a rated capacity of 940 picture tubes per hour total which includes:

(1) Three (3) high volume, low pressure (HVLP) automatic spray stations for applying anti-corona silicone coating, with a rated capacity of 940 picture tubes per hour total;

(2) Three (3) automatic roll-on stations for applying graphite external coating with a rated capacity of 940 glass picture tubes per hour total.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Requiring ENSR

There are no new facilities to be reviewed under the ENSR process.

Exempt Emission Units

The following emission units were declared exempt pursuant to CP 053-4524 which was issued on May 25, 1995:

(a) One (1) Harrington ECV - 67-5LB Vertical Fume Scrubber with an actual collection efficiency of 80% and exhausting to stack 36-9; (This unit is connected to the operations listed below, as well as several previously permitted operations.)

(1) One (1) SNG external paint removal washer with a caustic solution rate of 3 lb/hr; and

(2) One (1) salvage ultrasonic dechipping unit with a rinse station and an acidic solution rate of 2.5 lbs/hr.

Insignificant Activities

The stationary source includes the following regulated insignificant activities:

(a) Lehr #11, constructed in 1990, rated at 6.6 MMBtu/hr exhausting through stacks 26B-37, 26B-38, 26B039, 26B-40, 26B-41 and 26B-42.

(b) The following emission units used in the VLS Process: two (2) hydrogen annealing ovens; three caustic degreasing units, two (2) excelene generators, an ammonium bisulfide dip, a screen development process, a stud stripe process, a panel seal land clean process, a bismuth oxide spray, an acid neck wash, a funnel rim wash, a silastic sealant process, an anti-glare, anti-static coating process, and a cleaning process (windex).

(c) The stud stripe and screening units of the the Electrophotographic Screen (EPS) production process.

(d) Natural gas fired combustion sources with heat input less than ten million (10,000,000) Btu per hour.

(e) Propane or liquified petroleum gas , or butane -fired combustion sources with heat input equal or less than six million (6,000,000) Btu per hour.

(f) Combustion source flame safety purging on start up.

(g) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(h) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.

(i) Machining where an aqueous cutting coolant continuously floods the machining interface.

(j) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(k) Cleaners and solvents characterized as follows:

(1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100^{o}F) or;

(2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20 degrees C (68^{o}F);

the use of which is for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(l) The following equipment related to manufacturing activities not resulting in the emission of HAP's: brazing equipment, cutting torches, soldering equipment, welding equipment.

(m) Closed loop heating and cooling systems.

(n) Infrared curing equipment.

(o) Activities associated with the transportation of and treatment of sanitary sewage, provided the discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.

(p) Water based adhesives that are less than or equal to 5% by volume of VOCs, excluding HAPs.

(q) Forced and induced draft cooling tower system not regulated under a NESHAP.

(r) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(s) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.

(t) Asbestos abatement projects regulated by 326 IAC 14-10.

(u) Purging of gas lines and vessels that if related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(v) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(w) Blowdown of any of the following: sight glass, boiler, compressors, pumps and cooling tower.

(x) On-site fire and emergency response training approved by the department.

(y) Diesel generators not exceeding 1600 horsepower.

(z) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower.

(aa) Stationary fire pumps.

(bb) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 400 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.

(cc) Purge double block and bleed valves.

(dd) A laboratory as defined in 326 IAC 2-7-1(21)(D).

Existing Approvals

The source has been operating under the following approvals:

Operating Permits

(a) 27-04-89-0187, issued September 10, 1986; renewal filed February 3, 1989

(b) 27-04-89-188, issued September 10, 1986; renewal filed February 3, 1989

(c) 27-04-89-0189, issued September 10, 1986; renewal filed February 3, 1989

(d) 27-04-89-0190, issued September 10, 1986; renewal filed February 3, 1989

All conditions from previous approvals were incorporated into this Part 70 permit except the following:

(1) OP27-04-89-0190, issued on September 10, 1986
326 IAC 8-3 Organic Solvent Degreasing Operations
Reason not incorporated: The requirements listed in 326 IAC 8-3 are no longer applicable to the degreasing operation as the degreasing solvent has been substituted with a caustic material.

Construction permits

(a) CP (27) 1890, issued February 16, 1994, amended June 14, 1995 (A-053-4606)

(b) CP 053-3083, issued April 4, 1994

(c) Exemption Letter Permit No. 053-4524, issued on May 25, 1995

(d) CP 053-4828, issued March 25, 1996

(e) CP 053-6884, issued April 14, 1997

(f) CP 053-6252, issued January 7, 1997

(g) CP 053-8981, issued December 7, 1997

(h) CP 053-8511, issued February 19, 1998

(i) CP 053-8592, issued February 18, 1998

(j) CP 053-9214, issued January 29, 1998

All conditions from previous approvals were incorporated into this Part 70 permit.

Enforcement Issue

There are no Enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on November 18, 1996.

A notice of completeness letter was mailed to the source on December 5, 1996.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (12 pages).

Potential Emissions

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as “emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility.”

Total Potential Emissions

Pollutant	Potential Emissions (tons/year)
PM	24.593
PM-10	24.593
SO_2	217.96
VOC	154.30
Lead	0.0678
CO	373.29
NO_x	179.46

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

Total Potential HAP Emissions

HAP's	Potential Emissions (tons/year)
HF	4.9127
Toluene	26.474
MEK	0.131
MIBK	0.0655
Methanol	0.492
TOTAL	32.08

(a) The potential emissions (as defined in 326 IAC 1-2-55) of SO_2, NO_x, VOC and CO are each greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 for these criteria pollutants.

(b) The potential emissions (as defined in 326 IAC 1-2-55) of any single HAP is equal to or greater than ten (10) tons per year, and the potential emissions (as defined in 326 IAC 1-2-55) of a combination of HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1997 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	1.421
PM-10	1.419
SO_2	0.851
NO_x	132.83
VOC	46.371
CO	568.262

County Attainment Status

The source is located in Grant County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Grant County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

(a) There are no New Source Performance Standards (326 IAC 12 and 40 CFR Part 60) applicable to this source. The New Source Performance Standard for boilers does not apply to BLR1, BLR2 and BLR3 because their installation in 1949 and 1950 predates the effective date of 40 CFR 60 Subpart Dc.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 63) applicable to this source. The Degreasing Standard (40 CFR Part 63 Subpart T) does not apply since a caustic material is used instead of a solvent material.

State Rule Applicability - Entire Source

326 IAC 2-2 Prevention of Significant Deterioration

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21, this source is a major source.

326 IAC 2-6 Emission Reporting

Since this source is located in Grant County and the potential to emit VOC, SO_2, CO, and NOx is greater than 100 tons per year, 326 IAC 2-6 does apply.

326 IAC 5-1-2 Opacity Limitations

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%), any one (1) six (6) minute averaging period as determined by 326 IAC 5-1-4,

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or Fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities
Boilers

326 IAC 2-2 Prevention of Significant Deterioration (PSD) Minor Limit

Pursuant to CP (27) 1890, Boilers BLR1, BLR2 and BLR3 shall be operated at maximum combustion (approximately 90%) during bypass. The use of No. 2 fuel oil in the three boilers shall not exceed a total of 1,800,000 gallons per twelve month period rolled on a monthly basis. As a result, No. 2 fuel oil shall not exceed 1.7% sulfur. Therefore the PSD rules, 326 IAC 2-2, and 40 CFR 52.21 do not apply to Boilers BLR1, BLR2 and BLR3.

326 IAC 6-2-3(b) Particulate Matter (PM)

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emissions Limitations for Sources of Indirect Heating), the particulate matter (PM) emissions from the three natural gas and fuel oil-fired boilers, identified as BLR-1, BLR-2 and BLR-3, constructed in1949 and 1950, shall each not exceed 0.455 pounds per million British thermal units.

This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where:
- Pt = pounds of particulate matter emitted per MMBTU.
- C = Maximum ground level concentration with respect to distance from the point source at the “critical” wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty minute time period.
- Q = total source maximum operating capacity rating in MMBTU per hour heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility’s operated or the nameplate capacity, whichever is specified in the facility’s operation permit application, except when some lower capacity is continued in the facility’s operation permit; in which case, the capacity specified in the operation permit shall be used
- N = Number of stacks in fuel burning operation.
- a = plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBTU/hour heat input. The value 0.8 shall be used for Q greater than 1,000 MMBTU/hour.
- h = Stack height in feet. If a number of stacks of different heights exist, the average stack height to represent “N” stacks shall be calculated by weighting each stack height with its particulate matter emission rate. In this instance all stack heights are equal to 54 feet.

From Appendix A, the total potential emissions from all three boilers is 0.0137 pounds per million British thermal unit. Therefore, the three boilers are in compliance with this condition.

326 IAC 7-1.1 Sulfur Dioxide Emission Limits

Pursuant to 326 IAC 7-1.1-2(a)(2) (Sulfur Dioxide Emissions Limits) the SO_2 emissions from each of the boilers BLR1, BLR2 and BLR3 shall not exceed 1.6 pounds per MMBTU when combusting the maximum amount of residual fuel oil (1,800,000 gallons per year).

The total potential SO_2 emissions from the combustion of 1,800,000 gallons per year of No.2 fuel oil is 1.6 pounds per million British thermal unit when all the fuel oil is routed through Boiler #1. Therefore, the three boilers are in compliance with the fuel oil use and sulfur content limitations of CP (27)-1890 and 326 IAC 7-1.1.

326 IAC 7-4 Sulfur Dioxide Emissions and Fuel Sulfur Content

The permittee shall demonstrate that the fuel oil sulfur dioxide emissions from boilers BLR-1, BLR-2 and BLR-3 does not exceed 1.6 pounds per million Btu by:

(a) Providing vendor analysis of fuel delivered, if accompanied by a certification;

(b) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(1) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

State Rule Applicability - Individual Facilities
Lehr Units, LEHR #5, LEHR #6, LEHR #7, LEHR #8, and LEHR #9 (Natural Gas Generators)

There are no applicable emission limitations or standards due to emissions and dates of construction.

State Rule Applicability - Individual Facilities
Blackener Units, B-BLK1, B-BLK2, B-BLK3, B-BLK4

326 IAC 2-2 Prevention of Significant Deterioration (PSD)

Pursuant to conditions established in 326 IAC 2-2 and Construction Permit CP-053-8981, the concentration of Carbon Monoxide in the excelene generators to blackeners B-BLK1, B-BLK2, B-BLK3, and B-BLK4 as well as VLS blackeners #1, #2, and #3 shall be limited to 2.5 percent. Since CO emissions are greater than 250 tons per year, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) apply to this source.

326 IAC 9-1 Carbon Monoxide

Pursuant to Construction Permit CP 053-8981, issued on December 4, 1997, the Carbon monoxide (CO) content of the excelene gas to the four blackeners (#1-4) shall be limited to 2.5%, and this CO content shall be monitored on a weekly basis and reported to the Office of Air Management (OAM) quarterly.

State Rule Applicability - Individual Facilities
Base Plant Process Units, B-SFILM, B-FRIT, and B-CLEAN

326 IAC 6-3 Particulate Matter (PM)

The allowable PM emission rate from the Frit application and sealing unit B-FRIT shall each not exceed 1.95 pounds per hour when operating at a process weight rate of 660 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

From Appendix A, the total potential PM emissions from the Frit application and sealing unit B-FRIT is 6.67 pounds per hour but, with a control efficiency of 95% due to enclosure, the potential emissions are 0.213 pounds per hour. Therefore, B-FRIT is in compliance with this condition.

State Rule Applicability - Individual Facilities
Base Plant Picture Tube Recovery Operation B-SALVAGE

326 IAC 2-2 Prevention of Significant Deterioration (PSD)

Scrubbers 1, 2 and 3 must be operated at all times when the picture tube recovery operation B-SALVAGE is operating. Therefore the PSD rules, 326 IAC 2-2, and 40 CFR 52.21 do not apply to the Particulate Matter from the picture tube recovery operation B-SALVAGE.

326 IAC 6-3 Particulate Matter (PM)

Pursuant to 326 IAC6-3 (Process Operations; the allowable PM emission rate from the Picture Tube Recovery Operation B-SALVAGE shall not exceed 4.82 pounds per hour when operating at a process weight rate of 1.27 tons per hour.

The pounds per hour limitation was calculated with the following equation:

E = 4.10 P^0.67 where E = rate of emission in pounds per hour, and P = process weight rate in tons per hour

From Appendix A, the total potential PM emissions from the Picture Tube Recovery Operation B-SALVAGE is 0.617 pounds per hour. Therefore, the Picture Tube Recovery Operation is in compliance with this condition.

State Rule Applicability - Individual Facilities
Very Large Screen (VLS) Production Unit

326 IAC 2-2 Prevention of Significant Deterioration (PSD)

Any change or modification which may increase actual emissions from the VLS operation (CP 053-8511) and the six surface coating operations (CP 053-8592) to 25 tons per year or more of PM or 15 or more tons per year of PM_{10} shall require this stationary source to obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

326 IAC 6-3 Particulate Matter (PM)

The allowable PM emission rate from the VLS panel wash station and the picture tube salvage operation controlled by scrubber No. 9 shall not exceed 13.99 pounds per hour when operating at a process weight rate of 12,500 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

From Appendix A, page 12, the total potential PM emissions from the processes controlled by the VLS scrubber No. 9 is 0.242 pounds per hour. Therefore, the units are in compliance with this condition.

326 IAC 8-1-6 Volatile Organic Compounds (VOC)

(a) Pursuant to Construction Permit CP (27) 1890 and Operation Permit OP 1600- 0020, the emissions from the washer, seal land cleaner, funnel neck wash, funnel rim wash, salvage operation, and anti-glare/anti-static coatings will be controlled by the VLS scrubber with an overall efficiency of 95 percent.

(b) Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), CP-27-1980 and OP-1600-0020, the spray film process shall be controlled by a fume incinerator that reduces VOC emissions by 95 percent.

State Rule Applicability - Individual Facilities
Research and Development Production Line

326 IAC 8-1-6 Volatile Organic Compounds (VOC

The VOC input from this Research and Development production line shall not exceed 4.0 tons per year. Therefore the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) will not apply.

State Rule Applicability - Individual Facilities
Automatic Spray Stations and Roll-on Stations

326 IAC 2-2 Prevention of Significant Deterioration (PSD)

Any change or modification which may increase actual emissions from the VLS operation (CP 053-8511) and the six surface coating operations (CP 053-8592) to 25 tons per year or more of PM or 15 or more tons per year of PM_{10} shall require this stationary source to obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

326 IAC 6-3-2 Particulate Matter

Pursuant to CP 053-8592 and 326 IAC 6-3-2 the PM from the six (6) surface coating facilities shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by the use of the equation:

$E = 4.10\ P^{0.67}$ where: E = rate of emission in pounds per hour
P = process weight in tons per hour

326 IAC 8-1-6 Volatile Organic Compounds (VOC)

Pursuant to Construction Permit CP 053-8592 and 326 IAC 8-1-6 (New Facilities; general reduction requirements), the use of the volatile organic compounds (VOC) including coatings, dilution solvents, and clean up solvents, minus the VOC solvent shipped out, shall not exceed 24 tons per twelve (12) consecutive month period.

State Rule Applicability - Individual Facilities
Insignificant Activities

326 IAC 6-3-2 Particulate Matter (PM)

Pursuant to IAC 6-3-2 the allowable PM emission rate from the brazing equipment, cutting torches, soldering equipment, and welding equipment shall comply with 326 IAC 6-3-2 using the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000

pounds per hour shall be accomplished by the use of the equation:

E = 4.10 P^0.67 where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

326 IAC 8-3 Organic Solvent Degreasing Operations

The requirements listed in 8-3 no longer are applicable to the degreasing operation as the degreasing solvent has been substituted with a caustic material.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in permit Section D are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in permit Section D. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

(a) The BASE Plant boilers, production processes, picture tube recovery operation (B-SALVAGE), and the VLS production line, all have applicable compliance monitoring conditions as specified below:

(1) Daily visible emission notations of the stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(2) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(3) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(4) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(5) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

The control equipment for the above process must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

(b) The temperature of the fume incinerator used to control the spray film process units on the VLS Production Line must be continuously monitored, and maintained at a minimum temperature of 1350 ^{o}F.

The fume incinerator for the VLS Production Line must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

(a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act.

(b) See attached calculations for detailed air toxic calculations in Appendix A.

Conclusion

The operation of this television picture tube manufacturing plant shall be subject to the conditions of the attached proposed Part 70 Permit No. T053-7202-00020

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for a Part 70 Operating Permit

Source Name: Thomson Consumer Electronics
Source Location: 3301 S. Adams Street, Marion, Indiana 46953
County: Grant
SIC Code: 3671
Operation Permit No.: T053-7202-00020
Permit Reviewer: Lynn Nieman

On April 24, 1999, the Office of Air Management (OAM) had a notice published in the Marion Chronicle Tribune, Marion, Indiana, stating that Thomson Consumer Electronics had applied for a Part 70 Operating Permit to operate a stationary source which manufacturers television tubes. The notice also stated that OAM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAM has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table of Contents has been modified to reflect these changes.

Responses to Comments

Revision 1:

Upon further review the omission of Operation Condition 12 (Volatile Organic Compounds) from CP053-8511-00020 was noted. This condition will be added to this Title V Permit as follows.

D.6.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Any change or modification which may increase actual emissions from the VLS operation (CP 053-8511) and the six surface coating operations (CP 053-8592) to 25 tons per year or more of PM or 15 or more tons per year of PM_{10} shall require this stationary source to obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

(b) Any change or modification which may increase the Volatile Organic Compounds (VOC) emissions after control from the equipment covered in Construction Permits 053-8511 and 053-8592 to 40 tons per year or more shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

D.9.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Any change or modification which may increase actual emissions from the VLS operation (CP 053-8511)(Section D.6) and the six surface coating operations (CP 053-8592) to 25 tons per year or more of PM or 15 or more tons per year of PM_{10} shall require this stationary source to obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

(b) Any change or modification which may increase the Volatile Organic Compounds (VOC) emissions after control from the equipment covered in Construction Permits 053-8511 and 053-8592 to 40 tons per year or more shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

Revision 2:
For further clarification a reference will be added in Condition D.6.1 to clarify which surface coating operations are being referred to.

D.6.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Any change or modification which may increase actual emissions from the VLS operation (CP 053-8511) and the six surface coating operations (CP 053-8592)**(Section D.9)** to 25 tons per year or more of PM or 15 or more tons per year of PM_{10} shall require this stationary source to obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

(b) Any change or modification which may increase the Volatile Organic Compounds (VOC) emissions after control from the equipment covered in Construction Permits 053-8511 and 053-8592 to 40 tons per year or more shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

Revision 3:
In the additional D section that will be added pursuant to Comments 17 and 33, a condition will be added specifying that the three VLS blackeners potential emissions can not exceed 250 tons per year, pursuant to 326 IAC 2-2. The VLS Blackeners will stay under this limit through the limitation of less than 20.83 tons per month inlet Carbon Monoxide for all three of the blackeners. In addition a Quarterly Report will be added for the VLS Blackeners for the 20.83 tons per month inlet CO limitation. The following condition will be added:

D.8.1 PSD Minor Source Limit [326 IAC 2-2] [40 CFR 52.21]

All three (3) VLS Blackener units (VBLK-1, VBLK-2, VBLK-3) shall not exceed 249 tons per twelve consecutive month period of the inlet Carbon Monoxide. This condition will limit the total potential to emit CO from all three blackeners to less than 250 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration), and 40 CFR 52.21 not applicable.

During the first twelve months of operation, the inlet Carbon Monoxide shall be limited to less than 20.83 tons per month for all three of the VLS Blackeners (VBLK-1, VBLK-2, VBLK-3).

On May 24, 1999, Environmental Resources Management submitted comments on the proposed Part 70 permit on behalf of Thomson Consumer Electronics. The following is a summary of the comments. In the responses, additions to the permit are bolded for emphasis; the language with a line through it has been deleted. The Table Of Contents has been modified to reflect these changes.

Responses to Comments

Section A

Comment 1:
Condition A.2(f)(3)

This condition identifies a matrix development station that is controlled by a "fume incinerator to control volatile organic compounds." This emission unit does not (nor has it ever) exhaust through the VOC control system at the plant. This description should read simply:
"One (1) matrix development station with a rated capacity of 125 parts per hour."

Response to Comment 1:

The requested change has been made to Condition A.2(f)(3). The following changes will be made to the Condition:

(3) One (1) matrix development station with a rated capacity of 125 parts per hour ~~controlled by a fume incinerator to control volatile organic compound emissions, exhausting through stack 9~~;

Section B

Comment 2:
Condition B.11

This condition requires that Thomson supply a compliance Certification with "each term or condition" contained within the Permit. Thomson believes that it should be provided the ability to supply certification on an exception basis, that is, to certify that it was in compliance with " all terms and conditions contained in the permit except those identified below." The present wording could lead to the situation where Thomson was in violation for failing to accurately identify all terms and conditions within its permit.

Response to Comment 2:

The present language for item (1) matches the language in 326 IAC 2-7-6(5)(C). OAM is revising nonrule policy document, Air-007 NPD so that it will provide additional guidance regarding the annual compliance certification. There has been no change to Condition B.11.

Section C

Comment 3:
Condition C.19

This condition contains a requirement to supply an actual emission statement. Subcondition (a)(2) requires that actual emissions of regulated pollutants other than criteria air pollutants be reported annually "for purposes of Part 70 fee assessment." Indiana Rule 326 IAC 2-6 currently only requires the reporting of criteria air pollutants on an annual basis. Thomson understands that Part 70 fees are assessed for any regulated air pollutant not already counted under criteria emission summaries. For example, in the case of the Marion plant, Thomson would not be assessed a separate fee or toluene emissions from spray film, as these emissions are already included under VOC emissions in its annual emissions summary. Thomson suggests that subcondition (a)(2) be reworded as follows:

"Indicate actual emissions of other regulated pollutants from the source **that are not included in its criteria emission summary**, for the purpose of Part 70 fee assessment."

Response to Comment 3:

In order to clarify the actual emissions to be included in the emission summary Condition C.19(a)(2) will be changed. Condition C.19(a)(2) will now read as follows:

(2) Indicate **and differentiate** actual emissions of other regulated pollutants from the source **that are and are not already included in its criteria emissions summary**, for purposes of Part 70 fee assessment.

Section D

Comment 4:
Condition D.1.1

This condition contains sulfur dioxide emission limits for fuel oil combustion. The limit should be changed from 1.6 pounds per million Btu to 0.5 pounds per million Btu (to correspond with the rule limit for distillate fuel oil).

Response to Comment 4:

The sulfur dioxide emission limit for fuel oil combustion has been changed from 1.6 pounds per million Btu to 0.5 pounds per million Btu to correctly reflect the requirement of 326 IAC 7-1.1-2. Condition D.1.1 has been changed to the following:

D.1.1 Sulfur Dioxide (SO2) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2 (SO2 Emission Limitations) the SO2 emissions from the boilers BLR1, BLR2, and BLR3 shall not exceed ~~1.6~~ **0.5** pounds per million Btu when combusting distillate fuel oil.

Comment 5:
Condition D.1.4

This condition requires a preventive maintenance plan for the three boilers. Thomson believes that these units are below the levels at which Preventive Maintenance Plans are required and requests that this condition be deleted. In the event that this condition is retained, it should be reworded to eliminate reference to control device, since no such units are used on the boilers.

Response to Comment 5:

The requirement to maintain a Preventive Maintenance Plan is applicable to any facility that is required by 326 IAC 2-5.1 and 326 IAC 2-6.1, to obtain a permit. Any preventive maintenance that could effect emissions from the facilities in question should be listed in the Preventive Maintenance Plan. However, since there are no control devices used on the boilers the following change will be made to Condition D.1.4.

D.1.4 Preventative Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B Preventative Maintenance Plan, of this permit, is required for this facility ~~and its control devices~~.

Comment 6:
Condition D.1.6(a)

The sulfur dioxide emission limitation should be changed from 0.453 pounds per million Btu to 0.5 pounds per million Btu.

Response to Comment 6:

As a result of Comment 6, the sulfur dioxide emission limit for fuel oil combustion has been changed from 0.453 pounds per million Btu to 0.5 pounds per million Btu. Therefore it will correspond with the rule limit for distillate fuel and Condition D.1.1. Condition D.1.6(a) has been changed to the following:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate the fuel oil sulfur dioxide emissions does not exceed ~~0.453~~ **0.5** pounds per million Btu by:

Comment 7:
Condition D.1.7(a)

Thomson requests that the language in this condition be clarified with the additional phrase as outlined below:

"...shall be preformed **once per day** during normal daylight operations..."

Response to Comment 7:

Although Condition D.1.7(a) begins "Daily visible emission notations..." , for further clarification the requested language will be added. Condition D.1.7 has been changed to the following:

(a) Daily visible emission notations of the boilers' stack exhausts shall be performed **once per day** during normal daylight operations when exhausting to the atmosphere where No. 2 fuel oil is used. A trained employee shall record whether emissions are normal or abnormal.

Comment 8:
Condition D.1.8(b)

This condition should reference condition D.l.7 not D.1.6.

Response to Comment 8:

The requested change has been made to Condition D.1.8(b). The Condition will now read as:

(b) To document compliance with Condition ~~D.1.6~~ **D.1.7**, the Permittee shall maintain records of daily visible emission notations of the No. 2 fuel oil-fired boilers stack exhausts.

Comment 9:
Condition D.2.1

This condition indicates that IDEM may require a stack test to demonstrate compliance. Since there are no applicable emission limitations for the equipment covered in this section, Thomson requests that this condition be deleted.

Response to Comment 9:

Condition D.2.1 is normally a standard condition for a facility that does not have any specific testing requirements. However, since the Lehr units have no applicable emission limitations and there are no applicable compliance monitoring and record keeping or reporting due to their dates of construction and there exclusive natural gas usage, the condition will now read as:

D.2.1 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. ~~However, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~

Comment 10:
Condition D.3.2

This condition requires a Preventive Maintenance Plan for the Blackeners. The phrase "and its control devices" should be deleted, as the Blackener units have no control devices.

Response to Comment 10:

The requested change has been made to Condition D.3.2. The condition will now read as:

D.3.2 Preventative Maintenance Plan [326 IAC 2-7-5(13)]

A Preventative Maintenance Plan, in accordance with Section B Preventative Maintenance Plan, of this permit, is required for this facility ~~and its control devices~~.

Comment 11:
Condition D.3.4

The construction permit required the monitoring of the Base Plant Blackener No. 3 only. The reference to the VLS blackeners should be removed from this condition.

Response to Comment 11:

The reference to the VLS blackeners has been removed from Condition D.3.4. The condition will now read as:

D.3.4 CO Emissions

Pursuant to Construction Permit CP053-8981 the Carbon Monoxide (CO) content (2.5%) of the excelene gas to ~~the three VLS blackeners~~ **Base Plant Blackener 3 (B-BLK3)** shall be monitored on a weekly basis.

Comment 12:
Condition D.3.5(b)

The VLS Blackeners are included under the facility description for Section D.6. Conditions D.6.7 and D.6.13 contain monitoring and record keeping requirements identical with Conditions D.3.4 and D.3.5(b). Thomson requests that Condition D.3.4 and D.3.5(b) reference the Base Plant No. 3 blackener only.

Response to Comment 12:

Condition D.3.4 was changed to reference the Base Plant Blackener 3 in Comment 11. Condition D.3.5(b) will also be changed to reference the Base Plant No.3 Blackener only. In addition the reference to the VLS Blackeners will be deleted from the Quarterly Report regarding the 2.5% CO limit in the excelene gas stream. The condition will now read as:

(b) To document compliance with Condition D.3.4, the Permittee shall maintain records of the Carbon Monoxide content to the ~~three (3) VLS blackeners~~ **Base Plant Blackener 3.**

Comment 13:
Condition D.4.2

This condition requires a preventive maintenance plan for the equipment described in Section D.4. Thomson believes that emission rates for the equipment described in Section D.4 is smaller than that for which preventive maintenance plans are required. For this reason, Thomson requests that Condition D.4.2 be deleted.

Response to Comment 13:

IDEM, OAM has decided to remove this condition. The following change will be made thus renumbering all of the subsequent conditions.

~~D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~
~~A Preventive Maintenance Plan, in accordance with Section B- Preventative Maintenance Plan, of this permit, is required for this facility and its control devices.~~

Comment 14:
Condition D.4.4(a)

This condition requires daily visible emission notations for the "Base Plant production process stack exhausts." The particulate source operation within this group of equipment is conducted with an enclosed tank and does not have a stack exhaust. Included with this grouping is a VOC source and Thomson requests that the requirement to perform daily visible emission notations be deleted (as well as the requirement to record such data under D.4.5(a)).

Response to Comment 14:

Since there are no stacks on the facility identified as the Base Plant Production process, visible emission inspections are not required. Therefore both Condition D.4.4 and Condition D.4.5 will be deleted. The Conditions will now read as:

~~D.4.4 Visible Emissions Notations~~

~~(a) Daily visible emission notations of the Base Plant production processes stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~

~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~

~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~

~~(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.~~

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.4.5 Record Keeping Requirements~~

~~(a) To document compliance with Condition D.4.4, the Permittee shall maintain records of daily visible emission notations from the base plant production processes unit stack exhausts~~

~~(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~

Comment 15:
Condition D.5.4(a)

This condition establishes visible emission notation requirements for the base plant picture tube recovery operation. Only the scrubber in building 18 (No2) is a significant source, as referenced in Construction Permit CP 053-4828. Thomson requests that Condition D.5.4(a) be revised to be applicable to stack 18-31 only. Also, Thomson requests that the language in this condition be clarified with the additional phrase as outlined below:

"...shall be performed **once per day**, during normal daylight operations..."

Response to Comment 15:

Although Condition D.5.4(a) begins "Daily visible emission notations..." , for further clarification the requested language will be added. From Construction Permit 053-4828 only Scrubber No. 2 will be referenced in Condition D.5.4(a). Condition D.5.4(a) has been changed to the following:

D.5.4 Visible Emissions Notations

(a) Daily visible emission notations of the picture tube recovery operation ~~stacks (19-1, 18-31, and 17-2)~~ **stack 18-31** exhausting from ~~each~~ **the** scrubber **Number 2** shall be performed **once per day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

Comment 16:
Condition D.5.5

This condition establishes a requirement to perform pressure drop checks across the scrubbers used in the base plant picture tube recovery operation at least once per week. The condition requires that the instrument used for determining the pressure "shall comply with Section C - Pressure Gauge Specifications." There is no such pressure gauge specification contained in Section C of the proposed permit. Only scrubber No. 2 should be referenced in this condition.

Response to Comment 16:

Condition C.15 has been added to clarify the Pressure Gauge Specifications condition, thus renumbering all of the subsequent Section C conditions. From Construction Permit 053-4828 only Scrubber No. 2 will be referenced in Condition D.5.5. The conditions will now read as follows:

C.15 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

D.5.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across ~~the~~ scrubber~~s~~ **No. 2** used in conjunction with the picture tube recovery operation, at least once weekly when the picture tube recovery operation is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across ~~the~~ scrubber **No. 2** shall be maintained within the range of 3.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

Comment 17:
Condition D.6

This Section includes several emission units that operate as a part of the VLS portion of the plant. In the Base Plant, IDEM has separated emission units into several different emission units within the permit (Sections D.2, D.3, D.4, and D.5 all include emission units contained within the Base Plant). Although similar types of emission units, the VLS emission units have been grouped into a single emission point. Thomson believes that the permit would be clearer if the VLS emission units were separated into several different emission units [for example. Blackeners, Spray Film (with VOC controls), Salvage (with scrubber), and other emission units (grouped)].

Response to Comment 17:

Due to Condition D.6.1 (Prevention of Significant Deterioration) that applied a limit to all of the equipment included in CPs 053-8511 and 053-8592, and the rationale that they are a production line not a plant (ex: the Base Plant) all of the VLS emission units included in permit 053-8511 have been grouped into a single emission point in Section D.6. The Surface Coating Production Line (VLS Line) from CP 053-8592 is in Section D.9. The description of this line lists each emission unit individually to make it clear what is the composition of the VLS line. However, the VLS blackeners which are not included in either of the previous mentioned permits and are not subject to the previously mentioned limit will be moved to a new D.8 Section. The Conditions in Section D.6 and the affected D Sections will be renumbered accordingly. The following changes will be made as a result of this Comment.

Section A.2(f)

~~(2) Three (3) blackener units each with a rated capacity of 9,400 cubic feet per hour and a maximum CO gas content of 2.5% exhausting through stacks 27A-E14, 27A-E15, and 27A-E16;~~

Sect. A.2(h)

(h) Three (3) Blackener Units (VBLK-1, VBLK-2, VBLK-3) in the Very Large Screen Production Line each with a rated capacity of 9400 cubic feet per hour exhausting through stacks 27A-E14, 27A-E15, and 27A-E16, limited to 249 tons per twelve consecutive month period of inlet Carbon Monoxide.

Section D.6

~~(2) Three (3) blackener units each with a rated capacity of 9400 cubic feet per hour and a maximum CO gas content of 2.5% exhausting through stacks 27A-E14, 27A-E15, and 27A-E16;~~

~~D.6.7 CO Emissions~~

~~Pursuant to Construction Permit CP 053-8981 the Carbon Monoxide (CO) content (2.5%) of the excelene gas to the three VLS blackeners shall be monitored on a weekly basis.~~

D.6.13 Record Keeping Requirement

(a) To document compliance with Conditions ~~D.6.7,~~ D.6.8, D.6.9, and D.6.12 the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.6.4.

(1) Daily records of operating times and operating temperatures of the fume incinerator;

(2) Documentation of all corrective actions implemented, per event;

(3) Operation and preventive maintenance logs, including work purchase orders, shall be maintained;

(4) Quality Assurance / Quality Control (QA/QC) procedures;

(5) Operator standard operating procedures (SOP);

(6) Manufacturer's specifications or its equivalent;

(g) Equipment "troubleshooting" contingency plan;

~~(b) Log of the bypass time and operating mode for the excelene generators kept and made available for inspection by the Commissioner by request;~~

~~(c) A weekly log of the CO content of the excelene gas stream to the three VLS blackeners;~~

(d) A record of the incinerator temperature;

(e) Maintain records of daily visible emission notations of the Very Large Screen (VLS) production line stack exhaust;

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Three (3) Blackener Units (VBLK-1, VBLK-2, VBLK-3) in the Very Large Screen Production Line each with a rated capacity of 9400 cubic feet per hour exhausting through stacks 27A-E14, 27A-E15, and 27A-E16, limited to 249 tons per twelve consecutive month period of inlet Carbon Monoxide.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 PSD Minor Source Limit [326 IAC 2-2] [40 CFR 52.21]

All three (3) VLS Blackener units (VBLK-1, VBLK-2, VBLK-3) shall not exceed 249 tons per twelve consecutive month period of the inlet Carbon Monoxide. This condition will limit the total potential to emit CO from all three blackeners to less than 250 tons per year.

Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration), and 40 CFR 52.21 not applicable.

During the first twelve months of operation, the inlet Carbon Monoxide shall be limited to less than 20.83 tons per month for all three of the VLS Blackeners (VBLK-1, VBLK-2, VBLK-3).

D.8.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 Process Operations, the allowable PM emission rate from the Research and Development production line shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by the use of the equation:

E = 4.10P^0.67 where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements

D.8.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter and Carbon Monoxide limit specified in Conditions D.8.2, and D.8.1 shall be determined by a performance test conducted in accordance with Section C - Performance testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.8.5 CO Emissions

Pursuant to Condition D.8.1, the Inlet Carbon Monoxide for the three (3) VLS Blackeners shall be monitored on a weekly basis. This will be accomplished by monitoring the Carbon Monoxide (CO) content of the excelene gas to the VLS Blackeners. The following equation will be used to determine compliance with the Carbon Monoxide limit.

Loading factor = 0.0808 lb eg/ CF eg * (CO Content % / 100 mole eg) * (28.01 lb CO / 28.97 lb eg)

Inlet CO = Loading Factor * Air Flow Rate

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.6 Record Keeping Requirements

(a) To document compliance with Conditions D.8.1, the Permittee shall maintain records of the Carbon Monoxide emissions from the three VLS Blackeners.

(b) To document compliance with Condition D.8.5, the Permittee shall maintain records of the Inlet Carbon Monoxide to the three (3) VLS Blackeners.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.8.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.8.1, and D.8.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: Thomson Consumer Electronics
Source Address: 3301 S. Adams Street, Marion, IN 46952
Mailing Address: 3301 S. Adams Street, Marion, IN 46952
Part 70 Permit No.: T053-7202-00020
Facility: VLS Blackeners VBLK-2, VBLK-2, VBLK-3
Parameter: Carbon Monoxide (CO)
Limit: 249 tons per twelve consecutive months inlet Carbon Monoxide for all three blackeners;
First twelve months of operation 20.83 tons per month for all three blackeners.

(Annual Total Shall Not Exceed 249 Tons For All 3 Blackeners)
Month: _____ Year: _____

Month	Week	CO Content of excelene gas to blackeners (%)	Inlet Cabon Monoxide (tons/year) Determined by calculation
Quarterly Total:			

9 **No deviation occurred in this month.**

9 **Deviation/s occurred in this month**
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Comment 18:
Condition D.6 description item (3)

This condition identifies a matrix development station that is controlled by a "fume incinerator to control volatile organic compounds." This emission unit does not (nor has it ever) exhaust through the VOC control system at the plant. The description should read simply:

"One (1) matrix development station with a rated capacity of 125 parts per hour."

Response to Comment 18:

Pursuant to CP053-8511 Condition 11 (BACT), the matrix development and spray film stations must have the incinerator in operation at all times when operating. However, from the actual BACT Analysis (Page 2 of 2) it was only deemed necessary for the Spray Film station. The condition will be revised to reflect that the matrix development station is not required by BACT to have the incinerator operating at all times when operating. The following change will be made:

(2) One (1) matrix development station with a rated capacity of 125 parts per hour ~~controlled by a fume incinerator to control volatile organic compound emissions, exhausting through stack 9;~~

Comment 19:
Condition D.6.1

Thomson requests that this condition be deleted.

Response to Comment 19:

Condition D.6.1 Prevention of Significant Deterioration (PSD) which includes any change or modification that will increase actual emissions from the equipment in both CP 053-8511 and CP053-8592 to 25 tons per year or more of PM or 15 tons per year of PM10 shall require a PSD permit pursuant to 326 IAC 2-2 prior to such a change. This condition was necessary in previous permit (053-8511) to keep the VLS production line out of PSD and still remains necessary. No change was made as a result of this comment.

Comment 20:
Condition D.6.3

This condition specifies that the spray film process is controlled by a fume incinerator that reduces VOC emissions by 95%. Thomson has submitted a request to amend this condition to clarify that the 95% figure, as provided in this requirement, is intended to only be a control equipment destruction efficiency, and that the lower figure (suggested to be 90% capture and 95% destruction). Thomson requests that this amendment be incorporated into this Title V permit.

Response to Comment 20:

Pursuant to CP (27) 1890 and the Best Available Control Technology (BACT) analysis done pursuant to 326 IAC 8-1-6 the BACT was determined to be the use of a 95% overall efficient fume incineration system. This was also addressed in an Exemption letter 053-10660 when a regenerative thermal oxidizer with a 98% control efficiency was added and the existing incinerator was maintained as a back-up device. Therefore, the efficiency can not be changed to a lower figure. There has been no change as a result of this comment.

Comment 21:
Condition D.6.4

This condition requires a preventive maintenance plan for "this facility and its control devices." There several different emission units covered by this Section, most of which have potential emission rates below the levels at which preventive maintenance plans are required under Indiana Rule 326 IAC 1-6. Thomson requests that IDEM provide a listing of which units are subject to the requirement and which units are not.

Response to Comment 21:

IDEM, OAM has decided to remove this condition. The following change will be made thus renumbering all of the subsequent conditions.

~~D.6.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~
~~A Preventive Maintenance Plan, in accordance with Section B- Preventative Maintenance Plan, of this permit, is required for this facility and its control devices.~~

Comment 22:
Condition D.6.5

This condition indicates that stack testing is not required, but that IDEM may request testing to demonstrate compliance with "PM and VOC limits specified in Condition D.6.1 and D.6.2," Thomson believes that PM and VOC limits are actually specified in Conditions D.6.2 and D.6.3.

Response to Comment 22:

The requested change has been made to Condition D.6.5. The following changes will be made to the Condition:

D.6.5 Testing Requirements [326 IAC 2-7-6(1),(6)
The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter (PM) and Volatile Organic Compounds (VOC) limits specified in Conditions ~~D.6.1 and D.6.2~~ **D.6.2 and D.6.3** shall be determined by a performance test conducted in accordance with Section C - Performance testing.

Comment 23:
Condition D.6.7

The construction permit required the monitoring of the Base Plant Blackener No. 3 only. There are no current requirements for CO monitoring of the VLS blackeners.

Response to Comment 23:

Condition D.6.7 CO emissions for the VLS blackeners will be deleted. Additionally, in Condition D.6.13(a) the reference to Condition D.6.7 will be deleted, thus renumbering all of the subsequent conditions. The Conditions will now read as follows:

~~D.6.7 CO Emissions~~

~~Pursuant to Construction Permit CP 053-8981 the Carbon Monoxide (CO) content (2.5%) of the excelene gas to the three VLS blackeners shall be monitored on a weekly basis.~~

D.6.13 Record Keeping Requirement

(a) To document compliance with Conditions ~~D.6.7,~~ D.6.~~8~~ **7**, D.6.~~9~~ **8**, and D.6.~~12~~ **11** the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.6.4.

Comment 24:
Condition D.6.9

Scrubber monitoring is not a current requirement of the VLS permit. Thomson requests that this condition be deleted.

Response to Comment 24:

Although Scrubber Monitoring was not required in CP (27)1890, the VLS scrubber for PM control was required to have an efficiency of 95% and be in operation at all times when the VLS production line is in operation pursuant to CP (27)1890. Therefore, since Compliance Monitoring Requirements are necessary in Title V permits pursuant to 326 IAC 2-7-6(1) and 326 IAC 2-7-5(1) the scrubber monitoring condition is now required. No change was made as a result of this comment.

Comment 25:
Condition D.6.12

This condition requires that visible emission notations be made daily for the "VLS production line scrubber stacks 34-E34, 27A-E14, 27A-E15, 27A-E16, and 9 exhausts." The blackener and VOC incinerator stacks are not anticipated to have any visible emissions and should not be included in this condition. Thomson also requests that the language in this condition be clarified with the additional phrase as outlined below:

"...shall be performed once per day during normal daylight operations..."

Response to Comment 25:

The visible emission notations are used to indicate compliance with 326 IAC 5-1 and 326 IAC 6, without the requirement to have a person on site trained in opacity measurement. This requirement is designed as a trigger that the source perform some corrective action on the facility if visible emissions are abnormal, to ensure continuous compliance with emission limitations. If no visible emissions are observed then it will be recorded that no visible emissions were observed. Note that visible emission notations and quarterly inspections are only required when emissions are vented to the outside atmosphere. Although Condition D.6.12 begins "Daily visible emission notations..." , for further clarification the requested language will be added. Condition D.6.12 has been changed to the following:

(a) Daily visible emission notations of the Very Large Screen (VLS) production line scrubber stacks (34-E34. 27A-E14, 27A-E15, 27A-E16) and 9 exhausts exhausting from the scrubber shall be preformed **once per day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

Comment 26:
Condition D.6.13(a)

The reference to Condition D.6.4 (for the VOC emission limits) in this condition should be Condition D.6.3.

Response to Comment 26:

The requested change has been made to Condition D.6.13(a). The following changes will be made to the Condition:

D.6.13 Record Keeping Requirement

(a) To document compliance with Conditions D.6.7, D.6.8, D.6.9, and D.6.12 the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition ~~D.6.4~~ **D.6.3.**

Comment 27:
Condition D.7.3

This condition establishes a requirement for a preventive maintenance plan for the research and development production line. This equipment has potential emissions below the levels at which preventive maintenance plans are required under Indiana Rule 326 IAC 1-6. Thomson requests that IDEM delete this requirement.

Response to Comment 27:

IDEM, OAM has decided to remove this condition. The following change will be made thus renumbering all of the subsequent conditions.

~~D.7. Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan, in accordance with Section B- Preventative Maintenance Plan, of this permit, is required for this facility and its control devices.~~

Comment 28:
Condition D.7.7

This condition establishes visible emission notation requirements for the Research and Development Production line stack exhaust. The units covered in this section are very minor sources of particulate emissions. Thomson requests that the requirements to perform daily visible emission notations be deleted. If this condition is retained, Thomson requests that the language in this condition be clarified with the additional phrase as outlined below:

"...shall be performed once per day during normal daylight operations..."

Response to Comment 28:

Daily visible emission notations of the Research and Development Production line stack exhaust shall be preformed **once per day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

Comment 29:
Condition D.7.8(b)

This condition specifies that Thomson "maintain a log of weekly overspray observations, (and) daily and monthly inspections" to document compliance with Condition D.7.1. Condition D.7.1 contains limitations on VOC usage only. Thomson requests that this requirement be deleted.

Response to Comment 29:

Condition D.7.8(b) specified that Thomson "maintain a log of weekly overspray observations, daily and monthly inspections" to document compliance with Condition D.7.1. The incorrect condition was referenced, the correct condition should have been D.7.6. The following change will be made to the Condition:

(b) To document compliance with Condition ~~D.7.1~~ , **D.7.6** the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

Comment 30:
Condition D.8.3 (Renumbered as D.9.4)

This condition requires a preventive maintenance plan for the Surface Coating Production Line. Thomson believes that emission rates for this equipment is smaller than that for which preventive maintenance plans are required. For this reason, Thomson requests that Condition D.8.3 be deleted.

Response to Comment 30:

IDEM, OAM has decided to remove this condition. The following change will be made thus renumbering all of the subsequent conditions.

~~D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~
~~A Preventive Maintenance Plan, in accordance with Section B- Preventative Maintenance Plan, of this permit, is required for this facility and its control devices.~~

Comment 31:
Condition D.8.7 (Renumbered as D.9.8)

This requires monthly inspections for overspray on the rooftops and nearby ground. This operation applies a very controlled amount of coating to a small area on each picture tube. No overspray will be observable at the exhaust. Thomson requests that this Condition D.8.7 be deleted.

Response to Comment 31:

The monitoring of overspray emission, evidence of overspray emission or other noticeable change in overspray emissions is necessary to know when response steps may be required. IDEM, OAM in cooperation with the facilities inspector has determined that the monthly inspection for overspray is not necessary for this Surface Coating Production Line. The following change will be made and the affected conditions will be renumbered accordingly:

~~D.8.7 Monitoring~~

~~(a) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.~~

~~(b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.~~

Comment 32:
Condition D.8.8(b) (Renumbered as D.9.9(b))

This condition outlines certain record keeping requirements, including a log of "...daily and monthly inspections..." Section D.8 does not contain any requirements for daily inspections. Thomson requests that this condition be clarified.

Response to Comment 32:

The requested change has been made to Condition D.8.8(b). The requirement for daily inspections In addition the reference in this condition should be D.8.7. The following changes will be made to the Condition:

D.8.8 Record Keeping Requirements

(a) To document compliance with Condition D.8.1, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.8.1.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each month;

(4) The cleanup solvent usage for each month;

(5) The total VOC usage for each month; and

(6) The weight of VOCs emitted for each compliance period.

(b) To document compliance with Condition D.8.6, the Permittee shall maintain a log of monthly overspray observations, ~~daily and~~ monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 33:
TSD

Boilers 1,2,3 - References to a sulfur dioxide limit of 1.6 lb/MMBtu should be changed to 0.5 lb/MMBtu, and calculation tables should utilize 0.5% sulfur instead of 1.7% sulfur.

Base Plant Blackeners - The CO content in the base plant blackeners should all be changed from 1.5% to 2.5%. The air flow rates on the base plant blackeners should be:

Blackener #1 - 11,000 CF/hr
Blackener #2 - 14,000 CF/hr
Blackener #3 - 13,000 CF/hr
Blackener #4 - 11,000 CF/hr

VLS Blackeners - The CO content in the VLS blackeners should all be changed from 1.5% to 2.5%.

The Appendix A computation sheet for CO emissions utilizes a control efficiency of 50%. In this Title V application (and in the two most recent Construction Permit applications) Thomson has indicated a control efficiency of 0%. In reality, a portion of the CO in the Blackeners is converted to CO2 prior to discharge from the unit. Thomson does not have accurate information, however, on the percent conversion that takes place.

Response to Comment 33:

The OAM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. All of the above comments made regarding the TSD were changes that had been made to the Title V permit prior to public notice (Conditions D.3.1, D.3.4, and D.6.7) with the exception of the control efficiency used in calculating the CO emissions from the blackeners which was taken from the Title V application. As a result of the CO control efficiency removal from the blackeners and pursuant to 326 IAC 2-2, the three (3) VLS Blackener units (VBLK-1, VBLK-2, VBLK-3) shall not exceed 249 tons per 12 consecutive month period inlet Carbon Monoxide; for the first twelve months of operation the inlet Carbon Monoxide shall be limited to less than 20.83 tons per month for all three VLS blackeners (VBLK-1, VBLK-2, VBLK-3). This condition will limit the total potential to emit CO from all three blackeners to less than 250 tons per year. Therefore 326 IAC 2-2 (Prevention of Significant Deterioration), and 40 CFR 52.21 will not apply. Additionally calculations on page 12 of 21 (Appendix A) were revised to reflect the removal of the control efficiency. For further information refer to revision 1.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, IN 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

Boiler #1

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
34.3	300.5

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	1.1	1.1	0.1	15.0	0.8	12.6

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Industrial Boilers
#1 and #2 Fuel Oil

Company Name:	Thomson Consumer Electronics
Address, City IN Zip:	3301 S. Adams Street, Marion, IN 46953
OP:	27-04-89-0187
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Boiler #1

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
34.3	45.07	1.7

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	3.3	241.4 *(142.0S)*	24.0	0.20	5.0
Potential Emission in tons/yr	0.1	5.4	0.5	0.0	0.1

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-02-005-01/02/03) Supplement E 9/98
PM Emissions are Condensible and Filterable PM
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, IN 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

Boiler #2

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
34.3	300.5

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	1.1	1.1	0.1	15.0	0.8	12.6

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Industrial Boilers
#1 and #2 Fuel Oil

Company Name:	Thomson Consumer Electronics
Address, City IN Zip:	3301 S. Adams Street, Marion, IN 46953
OP:	27-04-89-0187
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Boiler #2

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
34.3	45.07	1.7

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	3.3	241.4 *(142.0S)*	24.0	0.20	5.0
Potential Emission in tons/yr	0.1	5.4	0.5	0.0	0.1

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-02-005-01/02/03) Supplement E 9/98
PM Emissions are Condensible and Filterable PM
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, IN 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

Boiler #3

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
66.6	583.4

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	2.2	2.2	0.2	29.2	1.6	24.5

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Industrial Boilers
#1 and #2 Fuel Oil

Company Name:	Thomson Consumer Electronics
Address, City IN Zip:	3301 S. Adams Street, Marion, IN 46953
OP:	27-04-89-0187
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Boiler #3

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		1.7
66.6	87.51	

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	3.3	241.4 *(142.0S)*	24.0	0.20	5.0
Potential Emission in tons/yr	0.1	10.6	1.1	0.0	0.2

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-02-005-01/02/03) Supplement E 9/98
PM Emissions are Condensible and Filterable PM
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Significant Lehr Units - BASE Plant

Lehr #5

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, Indiana, 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
22.8	199.7

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.8	0.8	0.1	10.0	0.5	8.4

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Significant Lehr Units - BASE Plant

Lehr #6

Company Name:	Thomson Consumer Electronics
Address City IN Zip:	3301 S. Adams Street, Marion, Indiana, 46953
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
14.8	129.6

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.5	0.5	0.0	6.5	0.4	5.4

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Significant Lehr Units - BASE Plant

Lehr #7

Company Name:	Thomson Consumer Electronics
Address City IN Zip:	3301 S. Adams Street, Marion, Indiana, 46953
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
18.4	161.184

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.6	0.6	0.1	8.1	0.4	6.8

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Significant Lehr Units - BASE Plant

Lehr #8

Company Name:	Thomson Consumer Electronics
Address City IN Zip:	3301 S. Adams Street, Marion, Indiana, 46953
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
18.4	161.184

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.6	0.6	0.1	8.1	0.4	6.8

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Significant Lehr Units - BASE Plant

Lehr #9

Company Name:	Thomson Consumer Electronics
Address City IN Zip:	3301 S. Adams Street, Marion, Indiana, 46953
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
22.8	199.7

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.8	0.8	0.1	10.0	0.5	8.4

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Carbon Monoxide Emissions
Blackener Units

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, IN 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

Process Area	Units Included	CO Content %	Loading Factor lb CO/CFeg	Air Flow CF eg/hr	Inlet CO lb/hr	Control Efficiency %	Outlet CO tpy
V	Blackener #1	2.5	0.00195	9,400	18.35 *	0	80.373
L	Blackener #2	2.5	0.00195	9,400	18.35 *	0	80.373
S	Blackener #3	2.5	0.00195	9,400	18.35 *	0	80.373
B	Blackener #1	2.5	0.00195	11,000	21.45	0	93.95
A	Blackener #2	2.5	0.00195	14,000	27.3	0	119.57
S	Blackener #3	2.5	0.00195	13,000	25.4	0	111.0
E	Blackener #4	2.5	0.00195	11,000	21.45	0	93.95

Methodology

Total CO tpy: 659.89

CO = Carbon Monoxide
CF = Cubic Feet
eg = exelene gas
Loading Factor = 0.08080 lb eg/CF eg x (X mole CO/100 mole eg) x (28.01 lb CO/28.97 lb eg)
X = CO content (%)
Inlet CO = Loading Factor x Air Flow Rate
Outlet CO = Inlet CO x Control Efficiency/100 x 8760 hrs/yr x 1 ton/2000lbs
* Inlet Carbon Monoxide for all three VLS Blackeners is limited to 249 tons per 12 consecutive months

Appendix A: Emissions Calculations
Particulate Matter, Lead, and Volatile Organic Comounds Emissions from the Fritting Operations in VLS and BASE Plant

Company Name:	Thomson Consumer Electronics
Address City IN Zip:	3301 S. Adams Street, Marion, IN 46953
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Frit Paste Ratio:	150 kg powder	to	12.5 kg vehicle
Batch Mixing Time:	0.5 hr/batch	or	2 batch/hr
Batch Production:	1.6 per day	or	467.2 per year
Lead Oxide Content:	75 percent	or	0.75 lb/lb PM
Bulb Production Rate:	24 hrs/day	or	365 days/yr
FRIT Production Rate:	0.8 hrs/day	or	365 days/yr

	VLS				BASE			
	Maximum Prod. Rate units/hr	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy	Maximum Prod. Rate units/hr	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy
PM	667 lb FRIT	0.01/FRIT	95	0.0487	667 lb FRIT	0.01/FRIT	95	0.0487
PM-10	667 lb FRIT	0.01/FRIT	95	0.0487	667 lb FRIT	0.01/FRIT	95	0.0487
VOCs	90 Bulbs	0.02/Bulb	0	8.4359	750 Bulbs	0.02/Bulb	0	70.299
Lead	667 lb FRIT	0.01/FRIT	95	0.0339	667 lb FRIT	0.01/FRIT	95	0.0339

Methodology:

Maximum Hourly FRIT Production Rate = 1.6 batches FRIT/day x 1 day/0.8 hrs x 150 kg powder/batch x 1 lb/0.45 kg
Maximum Bulb Production Rate is 90 bulbs per hour on VLS and 750 bulbs per hour in BASE Plant
PM & PM-10 Emission Factor = 1% of FRIT Powder throughput or 0.01 lb PM per lb FRIT powder
Lead Emission Factor = PM emission factor x Lead oxide Content (lb PbO/lb PM) x (207 lb Pb/223 lb PbO)
VOC Emission Factor = 0.08 lb VOC/lb FRIT x 361.25 lb FRIT/batch x 1.6 batch/day x 1 day/24 hrs x 1 ton/2000 lbs
PM, PM10, & Lead Annual Emissions = max prod. rate x EF x (100-CE)/ 100 x 8760 hrs/yr x 1 ton/2000 lbs
VOC Annual Emissions = max prod. rate x EF x (100 - CE)/100 x 8760 hrs/yr x 1 ton/2000 lbs

Terminology:

FRIT refers to Frit paste
FRIT vehicle refers to the solvent used to make FRIT paste
EF = Emission Factor
CE = Control Efficiency
PM = Particulate Matter
VOC = Volatile Organic Compounds
Pb = Lead
PbO = Lead Oxide
VLS refers to the Very Large Screen Production Plant
BASE refers to the Base Plant Production Process

Appendix A: Emissions Calculations
PM, NOx, and Hazardous Air Pollutant Emissions
from the Salvage Operations in the BASE Plant

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, IN 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

1992 Stack Test Data

	Hourly Input	Hourly Input
Scrubber #1:	1.328 lb HF	0.183 lb HF
	1.37 lb HNO3	0.682 lb HNO3
Scrubber #2:	0.433 lb HNO3	0.133 lb HNO3
Scrubber #3:	0.138 lb alkaline dust	0.053 lb alkaline dust

1995 Tube throughput: 100 tubes/yr

	Maximum Prod. Rate units/hr	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy
Scrubber #1				
PM	44.5 lb HF	0.06 lb HF	85	1.7726
PM-10	44.5 lb HF	0.06 lb HF	85	1.7726
NOx	42 lb HNO3	0.02 lb HNO3	50	2.1907
HAP-HF	2.5 lb HF	0.53 lb HF	85	0.8725
Scrubber #2				
PM	42 lb HF	0.01 lb HF	70	0.569
PM-10	42 lb HF	0.01 lb HF	70	0.569
NOx	42 lb HNO3	0.0 lb HNO3	70	0.4154
Scrubber #3				
PM	50 lb HF	0.00 lb HF	40	0.3627
PM-10	50 lb HF	0.00 lb HF	40	0.3627

Methodology:
PM Emission Factor = Input ST rate/HF + HNO3 usage rates
NOx Emission Factor = Input ST rate/HNO3 usage rate x (46 lb NOx/lb HNO3)
HAP-HF Emission Factor = Input ST rate/HF usage rate
Annual Emissions = Max Prod Rate x EF x (100-CE)/100 x 8760 hrs/yr x 1 ton/2000 lbs
ST = Stack Test Emission data
EF = Emission Factor
PM = Particulate Matter
CE = Control Efficiency

Appendix A: Emissions Calculations
Volatile Organic Compound Emissions
from the Screening Film Operations in the BASE Plant

Company Name:	Thomson Consumer Electronics
Address City IN Zip:	3301 S. Adams Street, Marion, IN 46953
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

Methanol Usage:	2530 gal/yr	38% not disposed
Methanol Density:	6.59 lb/gal	
Annual Hours of Operation:	7200	750 units per hour
Polymer Usage:	600 mg polymer (VOC) per panel	

	Maximum Production Rate units/hour	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy
Segment #1 VOCs	750 tubes	0.00117 /tube	0	3.8542
Segment #2 VOCs	750 tubes	0.00132 /tube	0	4.3452

Methodology:

Segment #1 Emission Factor = $\frac{\text{Methanol Usage Rate x Percent not disposed x Methanol Density}}{\text{Annual Hours of Operation x Hourly Production Rate}}$

Segment #2 Emission Factor = Polymer Usage Rate x 1g/1000 mg x 1lb/453.6g
Annual Emissions = max. prod. rate x EF x (100-CE)/100 x 8760 hrs/yr x 1 ton/2000 lbs
EF = Emission Factor
CE = Control Efficiency
VOC = Volatile Organic Compound

Appendix A: Emissions Calculations
Volatile Organic Compound Emissions
from the Cleaning Operations in the VLS and BASE Plant

Company Name:	Thomson Consumer Electronics
Address City IN Zip:	3301 S. Adams Street, Marion, IN 46953
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	3-1-99

BASE Plant dilution ratio:	1:1	Windex	to	isopropyl alcohol
VLS dilution ratio:	4:1	Windex	to	isopropyl alcohol
BASE Plant usage (Windex):	3,384	gal Windex	to	3,384 gal IPA
VLS usage (Windex):	1354	gal Windex	to	338 gal IPA
Total usage (Windex):	4738	gal Windex	to	3,723 gal IPA
Density of Windex:	8.25	lb/gal		
Density of IPA:	6.59	lb/gal		
BASE Plant Production:	3,293,456	tubes/yr	to	750 tubes/hr
VLS Production:	444,678	tubes/yr	to	90 tubes/hr

	IPA Usage lbs/yr	Windex Usage lbs/yr	% VOC Windex %	% VOC in IPA %	Total VOCs lbs/yr	lb VOC per part lbs/tube	Total VOCs tpy
VLS	2,230	11,168	7	100	3,012	0.0067	3
BASE	22,302	27,921	7	100	24,257	0.0073	24

Total:	27 (tpy)

Methodology:

VOC Emission Factor = $\frac{\text{Annual Chemical Usage x Chemical Density x Percent Volatiles/100}}{\text{Annual Production}}$

VOC Annual Emissions = Maximum Production Rate x EF x 8760 hrs/yr x 1 ton/2000 lbs
EF = Emission Factor
VOC = Volatile Organic Compound
VLS refers to the Very Large Screen Production process
BASE refers to the Base Plant Production process
All emissions from these processes are uncontrolled.

Appendix A: Emissions Calculations
Volatile Organic Compound Emissions
from the Anti-Corona Coating Operations in VLS and BASE Plant

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, IN 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

Anti-Corona coating application rate: 0.37 lbs/hr
1995 Tolulene Usage: 9,396 lbs
BASE Plant Production: 3,293,456 tubes/yr
VLS Production: 80 tubes/hr

	VLS				BASE			
	Maximum Prod. Rate units/hr	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy	Maximum Prod. Rate units/hr	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy
VOCs	80 tubes	0.004/tube	0	1.4585	750 tubes	0.007/tube	0	23.0457
Tolulene	80 tubes	0.004/tube	0	1.4585	750 tubes	0.007/tube	0	23.0457

Methodology:

VLS VOC Emission Factor = Coating Application Rate/Tube Production Rate x VOC Content of Coating
BASE Plant VOC Emission Factor & = $\frac{\text{Coating Application Rate}}{\text{Tube Production Rate}} \times \text{VOC Content of Coating} + \frac{\text{Annual Tolulene Usage}}{\text{Annual Tube Production}}$
BASE Tolulene Emission Factor
VLS Tolulene Emission Factor = Coating Application Rate/Tube Production Rate x Tolulene Content of Coating
VOC Annual Emissions = Maximum Production Rate x EF x 8760 hrs/yr x 1 ton/2000 lbs
EF = Emission Factor
CE = Control Efficiency
VOC = Volatile Organic Compound
VLS refers to the Very Large Screen Production Process
BASE refers to the Base Plant Production process

Appendix A: Emissions Calculations
Commercial Boilers < 100 MMBtu/hr
Natural Gas Combustion

Company Name: Thomson Consumer Electronics
Address City IN Zip: 3301 S. Adams Street, Marion, IN 46953
Plt ID: 053-00020
Reviewer: Lynn Nieman
Date: 3-1-99

Units Included	Produc Area	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Percent of Total %
Frit Seal Lehr	V	4	35	12
Inline Exhaust	L	3	26.3	9
Generator #1 (North)	S	3.44	30.1	10
Generator #2 (South)		3.44	30.1	10
Inline Exhaust	B	3	26.3	9
Natural Gas Boiler	A	3.44	30.1	10
Generator #1 (West)	S	3.44	30.1	10
Generator #2 (East)	E	3.44	30.1	10
Stabilizing Lehr #11		6.6	57.8	25
TOTAL		33.8	296.1	100

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	1.1	1.1	0.1	14.8	0.8	12.4

Methodology:

MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: uncontrolled = 100, Low NOx Burner = 17, Flue Gas Recirculation = 36
Emission Factors for CO: uncontrolled =21, Low NOx Burner = 15, Flue Gas Recirculation = ND
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8760 hrs/yr x 1 MMCF/1000MMBtu
Emission Factors from AP42, Chapter 1.4, Tables1.4-1, 1.4-2, 1.4-3, SCC #1-03-006-03
Emission (Tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Thermal Oxidizer

Company Name:	Thomas Consumer Electronics
Address City IN Zip:	3301 South Adams Street, Marion, IN 46953
CP:	053-8511-00020
Plt ID:	053-00020
Reviewer:	Lynn Nieman
Date:	02-26-99

Heat Input Capacity MMBtu/hr Primary and Secondary	Potential Throughput MMCF/yr
8.3	73.0

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.3	0.3	0.0	3.6	0.2	3.1

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Potential Emission Calculations
PM, VOC, and Hazardous Air Pollutant Emissions
from Miscellaneous VLS Operations
Thomson Consumer Electronics

	Chemical Throughput lbs/hr	Maximum Production rate units/hr	Percent estimated %	Chemical Concentration %	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy
Caustic Degreasing							
PM	NA	293 panels	–	–	1.60E-04/part	60	0.08234
PM-10	NA	293 panels	–	–	1.60E-04/part	60	0.08234
Matrix Development							
VOC	0.41	90/hour	100 %	–	0.00456/panel	95	0.08979
Screen Development							
VOC	0.52	90/hour	100 %	–	0.00578/panel	0	2.2776
Spray Film, Stud Stripe							
VOC- Laquer	26 lb Laquer	90/hour	23 %	–	0.06644/panel	95	1.30692
HAP-Tolulene	26 lb Laquer	90/hour	–	17.25 %	0.04983/panel	95	0.98222
HAP-MEK	26 lb Laquer	90/hour	–	2.3 %	0.00664/panel	95	0.13096
HAP-MIBK	26 lb Laquer	90/hour	–	1.15 %	0.00332/panel	95	0.06548
VOC-S.F.	4.5 lb Tolulene	90/hour	100 %	–	0.05/panel	95	0.9855
HAP-Tolulene	4.5 lb Tolulene	90/hour	–	100 %	0.05/panel	95	0.9855
VOC-S.S.	0.01 lb Stud	90/hour	100 %	–	0.00011/panel	0	0.0438
Bismuth Oxide Spray							
PM	7.6 lb BO	90/hour	1 %	–	0.00084/mask	0	0.33288
PM-10	7.6 lb BO	90/hour	1 %	–	0.00084/mask	0	0.33288
Silastic Sealant							
VOC	0.005 lb Sealant	80/hour	12 %	–	8E-06/tube	0	0.00263
Anti-Glare, Anti-Static Coating							
PM	2.52 lb Spray	72/hour	15 %	–	0.00525/tube	95	0.08278
PM-10	2.52 lb Spray	72/hour	15 %	–	0.00525/tube	95	0.08278

Methodology:
*PM Emission Factor for Caustic Degreasing = ST Emission Rate x Unit Production Rate
PM Emission Factor = PM Content x Chemical Usage Rate/Unit Production Rate
VOC Emission Factor = HAP Content x Chemical Usage Rate/Unit Production Rate
Annual Emissions = Max. Prod. Rate x EF x (100-CE)/100 x 8760 hrs/yr x 1 ton/2000 lbs

ST = Stack Test Data
EF = Emission Factor
CE = Control Efficiency
PM = Particulate Matter
VOC = Volatile Organic Compound
IPA = Isopropyl Alcohol
HAP = Hazardous Air Pollutant
Tol. = Tolulene
MEK = Methyl Ethyl Ketone
MIBK = Methyl Isobutyl Ketone

Appendix A: Potential Emission Calculations
PM, VOC, and Hazardous Air Pollutant Emissions
from Miscellaneous VLS Operations
Thomson Consumer Electronics

	Chemical Throughput lbs/hr	Percent Estimated %	Chemical Concentration %	Emission Factor lb Poll/unit	Control Efficiency %	Annual Emissions tpy
Panel Wash						
PM	18.75 lb HF	2.25 %	–	0.005/panel	90	0.18478
PM-10	18.75 lb HF	2.25 %	–	0.005/panel	90	0.18478
HAP-HF	18.75 lb HF	–	12 %	0.004/panel	90	0.16207
Ammonium Biflouride Dip						
PM	0.21 lb ABF	2.5 %	–	0.00/panel	60	0.0092
PM-10	0.21 lb ABF	2.5 %	–	0.00/panel	60	0.0092
Panel Seal Land Clean						
PM	1.6 lb HF	2.5 %	–	0.00/panel	60	0.0708
PM-10	1.6 lb HF	2.5 %	–	0.00/panel	60	0.0708
HAP-HF	1.6 lb HF	–	5 %	0.00/panel	60	0.02305
Acid Neck Wash						
PM	7.6 lb Acid	2.5 %	–	0.002/panel	60	0.33288
PM-10	7.6 lb Acid	2.5 %	–	0.002/panel	60	0.33288
HAP-HF	7.6 lb Acid	–	5 %	0.001/panel	60	0.10949
NOx	7.6 lb Acid	–	10 %	0.003/panel	60	0.54189
Funnel Acid Rim Wash						
PM	3.8 lb Acid	2.5 %	–	0.001/panel	60	0.16644
PM-10	3.8 lb Acid	2.5 %	–	0.001/panel	60	0.16644
HAP-HF	3.8 lb Acid	–	5 %	0.000/panel	60	0.05474
Ammonium Biflouride Etching						
PM	125 lb ABF	1.0 %	–	0.014/panel	60	2.19
PM-10	125 lb ABF	1.0 %	–	0.014/panel	60	2.19
Salvage						
PM	40 lb Solution	2.5 %	–	0.011/panel	80	0.876
PM-10	40 lb Solution	2.5 %	–	0.011/panel	80	0.876
NOx	19.5 lb HF	–	18 %	0.016/panel	80	1.25135
NOx	12 lb Acid	–	8 %	0.004/panel	80	0.34225
HAP-HF	12 lb Acid	–	7.5 %	0.002/panel	80	0.12965
HAP-HF	2.5 lb HF	–	17 %	0.001/panel	80	0.06123